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**Original Communications.**

ARTICLE I.—*Cerebro-Spinal Meningitis, or, Spotted Fever.* Read before the Joint Session of the Woodford and Marshall County Medical Societies, assembled at Winona, Ill., January 6th, A. D. 1874. By JAMES S. WHITMIRE, M.D., of Metamora, Ill.

MESSRS. PRESIDENT AND GENTLEMEN OF THIS JOINT ASSOCIATION :

At the last meeting of the Woodford County Medical Society, held at Eureka, I was designated by our President to make a special report at the joint meeting of these Societies on the subject of Cerebro-Spinal Meningitis, so-called, as it appeared in Woodford county during the latter part of the winter and spring of 1872, and the latter part of the fall and winter of 1872-73. In accordance, therefore, with such appointment, I would beg leave to submit the following report.

This disease made its first appearance in the vicinity of Metamora and Spring Bay simultaneously, about the middle of February, and from these places it spread east and north respectively, for many miles; but within this range there were certain localities that suffered more severely than others. In the two places par-

ticularly mentioned, and in their vicinity, it assumed all the malignancy and produced all the horrors of a terrible and alarming plague. It was clearly epidemic in our range of practice, and though other portions of the county suffered to some extent, yet in those it seemed to appear more in a sporadic form, there occurring no more than one, two or three cases in a neighborhood, though, even in that case, it seemed to abate none of its malignancy; neither, in any locality, did it seem to be any respecter of persons, because it attacked individuals of all ages, sexes and conditions, from sixty years down to the infant at the mother's breast.

The disease again made its appearance in the vicinity of Spring Bay during the latter part of November of the same year, assuming, from the commencement, an epidemic character, and did not abate, either its spread, or its violence, till February, 1873. To speak more particularly of our spring epidemic of spotted fever, it became so alarmingly prevalent during the month of April, and the mortality was so great, that the whole population became greatly agitated and alarmed; and the fear was so general, that for a time it was almost impossible to procure aid for taking care of the sick, lest there should be either contagion or infection connected with it. During this time, the late Judge Richmond was holding court in Metamora, and the alarm was so general on account of the prevalence and fatality of the disease, that a panic was produced among all classes, so that it was with the greatest difficulty the court, with all its judicial authority, could keep the witnesses and empaneled jurors from making an immediate simultaneous stampede.

The spring epidemic at Spring Bay was neither so wide-spread nor fatal as it was with us in the vicinity of Metamora and east, but it extended up and down the Illinois river bottom for eight or ten miles, and back into the country among the bluffs for several miles from the river, but it followed, principally, the creeks and swales that carried the debris from the hill country on its way to the Illinois river. I have frequently witnessed sporadic cases of this disease in the autumn of different seasons since 1848, but I never before witnessed the disease assume an epidemic character, at this season of the year, till it made its appearance in that manner in November, 1872, when it put in an appearance at Spring

Bay and along the river bottom, in its most deadly character, and continued till the early spring of 1873.

In the spring epidemic, along the Illinois river, the disease seemed to be, and was, quite amenable to the influence of medicine, and my friend, Dr. J. G. Zeller, who lives at the Bay, had all who were attacked in the range of his practice to attend. He was much more successful in his treatment, at this time, than we were who practiced on the prairies, nearly all, or at least a large proportion, of his patients making a speedy recovery. He did not, during the spring epidemic, lose to exceed fifteen per cent. of his patients, so that reckoning from his own standpoint of success, he very naturally came to the conclusion that the disease was but little, if any, more fatal than others of our endemic diseases, and that its fatality with us on the prairies away from the river, was owing to bad management or other remediable causes. In his cases the most alarming symptoms usually disappeared on the administration of quinine, but still there remained after its administration the persistent contraction of the posterior cervical and the dorsal muscles, but by the continuation of tonic doses of this drug the contraction gradually gave way, and his patients were soon traveling on the highway to health and happiness. But the fact that the disease yielded so certainly to the influence of quinine, and that its characteristic symptoms slowly relaxed under its continuance, makes the presumption strong, notwithstanding most of the distinguishing features of so-called cerebro-spinal meningitis were present—and this, no doubt, on account of the epidemic cause of the disease being present—that miasmata was the principal factor in the disease as it prevailed at this time.

But the epidemic that occurred the following fall and winter presented itself with the same virulence that had attended its visitation during the spring previously, in the vicinity of Metamora. One family living in Spring Bay, during the epidemic lost three children, between the ages of six and fourteen years, with the disease in less than three weeks, two of whom were attacked and died within the same twenty-four hours, and buried in the same grave. I had the honor of being called in consultation with Dr. Zeller in three cases, one of which was his own child; and while on this visit, the Doctor was pleased to take me with him to see seven or eight others who had been stricken with the same disease,

all lying within a radius of half a mile; and of that number there was but one perfect recovery; two got up; one of them was perfectly blind, and the other permanently deaf. In this epidemic, I think that I am safe in saying that there were fully fifty per cent. of fatal cases, probably more, and some of the cases lingered for over one hundred days before they died, and one perfectly recovered when convalescence was not fully established till after that period.

In our spring epidemic on the table lands, we had very much such a time and experience as that of Dr. Zeller during the fall and winter, and the disease assumed the same malignant type. One case that came under my care was a young lady, Miss W., aged sixteen years, in whom the disease was presented in its most deadly form. She arose from her bed in the morning, made a fire, and proceeded to get breakfast for the family; after breakfast her father and mother went to Washington, four miles distant, to do some shopping. On their return at 12 o'clock, M., they found her lying on the bed in a partially insensible condition; alarmed at this, I was immediately sent for, and arrived about 2 o'clock, P. M. The surface of my patient was cool and pallid; the pupils of both eyes were dilated to their utmost extent; her pulse was beating at the rate of only sixty per minute, moderately full, but soft and feeble; her hearing was obtuse, and she answered questions only in monosyllables, and not then and in that manner unless she was sharply addressed; besides, her comprehension was exceedingly dull. I ordered her one tablespoonful of whisky, in hot milk, every five, ten, or fifteen minutes, and directed that she should be packed in a blanket wrung out of hot water, but before we could get the water hot she was a corpse.

My friend, Dr. A. H. Kinnear, I believe, had the misfortune to be called to one or two similar cases, where the patients succumbed to the toxic effects of the cause before there was any chance for medication. I simply mention these cases in connection with those of Dr. Zeller, that died so suddenly, because I may have occasion to refer to them again in this paper when I come to treat of the etiology of the disease.

It is not my purpose, in this paper, to enter the field of history in regard to this disease, as it has made its appearance in this and other countries at different times; neither is it



my purpose to give the general or diagnostic signs of the disease, because these are sufficiently detailed in our standard works, and have now become a part and parcel of our reliable medical literature, about which there is no controversy. But my purpose will be to direct the mind of the inquirer to the cause or causes that may or may not combine to produce this disease; and these we can only approximate by observation and comparison, always keeping in mind the condition and circumstances under which it is most generally manifested, and in so doing, we will scarcely lose sight of the mooted question, whether this is a zymotic or other form of disease. In this connection I will state, as my opinion, that this disease originates from the direct influence of a blood poison, which is generated by extraneous causes, and is, most probably, received into the blood through the instrumentality of respiration; that this is an extrinsic, impalpable poison, and that it is cumulative in its nature, rather than a reproducer of itself—the latter property belonging only to the contagious zymoma. Or, perhaps it would be better to make the statement that the animal economy, through the blood, is capable of receiving and retaining a very considerable amount of the poison for a long time, and the vital forces of the economy show no indications of its toxic influence. But, when such quantity of the toxical principle has accumulated in the circulating fluid of the body as to produce pathological changes in the blood, or to directly spend its force upon the brain and spinal cord, its toxical effects are sure, speedy and powerful, and the victim is stricken down in an instant, unawares, when probably there had been no prodromic signs whatever, that might have been considered even a slight indisposition.

These opinions I have formed from observations made during the recent epidemic, of which I have already made mention; but my mind had previously been moved in that direction during former epidemics that have occurred under my immediate notice since 1848. That the poison, whatever it may be, or however it may be produced, is cumulative, there can be no doubt; because, during the prevalence of an epidemic of spotted fever, every person seems to be subject, to a greater or less degree, to manifestations of its influence, and the reason why one person is attacked and another escapes, is probably the peculiar susceptibility of the one, and the power of resisting morbid influences in the other.

During an epidemic of this disease, let any individual fall sick of any other disease, so that his vitality becomes impaired, and you will most certainly observe many of the symptoms of this disease manifested during the progress of the disease under which your patient is suffering. This holds good and is abundantly proven by the observations of every medical man who has passed through an epidemic of cholera or yellow fever; and there is no epidemic disease that is not more or less influenced by the type and character of the endemic diseases of the country where it may exist; and especially is this the case where our miasmatic fevers are most common. Probably no epidemic manifests this peculiarity more generally or more certainly than the disease under consideration, because many of its characteristic symptoms are inevitably present in all the endemic diseases that prevail at the time of the prevalence of the epidemic. I have treated very many children, and carried them successfully through an attack of infantile pneumonia to convalescence, and then, just when I was about to discharge the little sufferer as no longer needing medical care, and commenced congratulating the parents on the restoration of their darling to the blessings of health, this infernal disease—this so-called cerebro-spinal meningitis—would make its appearance with all its afflicting horrors, and, in spite of all the medical aid that could be rendered, it would carry its victim to the grave. That this disease has a malaria-miasmatic origin I have no doubt; but what the difference in the constitution of the poison consists in, that would designate it from that of our autumnal fevers, or from that of our typhoid fevers, is a question that is not yet solved, neither am I at this time able to answer. Nevertheless, it is true that neither malaria, proper, nor miasmata, has ever been made palpable by the most carefully directed experiments; neither have their existence been demonstrated by the most delicate chemical reagents. The spore theory may settle some of these difficulties in regard to intermittents, but that is far from receiving the unqualified sanction of the profession. Yet, that marsh miasm—whatever that may be—produces our intermittent and remittent fevers, there is no longer any doubt, and the presence of such poison is made evident from the circumstances that demonstrate its existence. So it is, too, with typhoid fever; it has its own special cause, because there is no other disease that runs the course that

It does, or that manifests the same phenomena; neither are there any that produce the same pathological results. It was by the closest scrutiny and the most diligent observation of the circumstances and surroundings that attend the development of this disease, that has caused the profession to settle down in the conviction that it requires the decomposition of both animal and vegetable matter to produce that kind of poison, or malaria, that will favor the production of the latter disease; hence we see it most frequently making its appearance in crowded and illy ventilated apartments, where not only the animal exhalations from the body and lungs are present, but the excrements and other debris are not wanting to induce a ferment that is sufficient to poison the occupants of the premises.

In the vicinity of Spring Bay, and up and down the Illinois river, where cerebro-spinal meningitis, so-called, made its appearance by a most fearful and sudden mortality among those attacked during the fall and winter, the country for miles in every direction, excepting east, and even in front of the town, is a continued marshy swale, filled with lagoons; so that during the summer and autumn months, at least, the atmosphere cannot possibly be in any other condition than rife with marsh miasm; and what tends greatly to make the matter worse, the cattle, hogs and horses of the surrounding country, in seeking food, are constantly miring down and dying in these marshes, so that a combination of malaria and marsh miasm is, at one and the same time, generated and evolved, that is sufficient to poison the atmosphere for miles back into the country.

What other factor or entity may be present in connection with malario-miasmata, that forms a new and distinct product, has not so far been ascertained; but certainly a concatenation of circumstances, such as temperature, moisture, or electricity, or the whole combined, may be present, so that the three factors, or the two that are known, may be so acted upon by unknown agencies as to develop a third, the toxic action of which is greater than either one of its original constituents. This may be instanced by an illustration in chemistry, where the union of amygdalin and emulsin, either of which, separately, is innoxious, but united they form hydrocyanic acid, one of the most deadly poisons known, and which has no resemblance physically or therapeutically, to either of

its constituents. It need not be said by the opponents of this theory, that the epidemic form of this disease always comes in the fall, winter and spring, and therefore there is no chance for decomposition and the consequent evolution of poison. Because, it is not the fact, according to the history of this disease, that it always makes its appearance in cold weather, for it has been known to appear as an epidemic in every month of the calendar.

The people of Woodford county seem to have had a mania for underground cellars, and nearly every respectable dwelling in the county has a cellar under it. These are stored full during the winter season of every kind of vegetables, and to keep them from freezing, every aperture is closed up, so that neither air, frost nor light can enter, making every one a dungeon, deep, dark and damp, without any available means of ventilation. These cellars are generally without means of drainage, on account of the lay of the land, and even where there is an opportunity for drainage, the nature of the soil and underlying clay precludes the possibility of their being kept dry, and, therefore, both winter and summer, they are damp and noisome, even when there is abundant opportunity to give them light and ventilation. During the winter season, on account of this moisture, heat and stagnant air, all the vegetables are undergoing the process of decay to a greater or less extent. In these noisome holes are also deposited the offal of meat and other animal remains; hence, the heat of the cellar during the winter months is capable of generating a malarial miasmata, the toxic influences of which must produce the most deleterious effects upon all who come within its range. This being undoubtedly true, it is a question worthy of further investigation, whether a poison generated under such circumstances, and at a temperature much of the time below 60° F., may not render its properties peculiar, and make it more inimical to human life than when produced under other and varied circumstances.

This disease-producing cause, whatever it may be, and however it may be produced, acts, through the blood, upon the brain and spinal cord, but, whether there is any material change produced in the constitution of the blood by the presence of the poison in that fluid before the manifestation of its toxical effects, is a point that is not yet settled, and certainly deserves further investigation;

neither is it settled whether, or not, the poison is simply carried through the system by means of the blood, without change of either, to spend its force upon the great nerve-centres. All these things require further investigation, but now that we think we have reached the entrance of the bay that leads to a safe haven, we may confidently expect the explorations to continue till the lineal survey will be made complete, and the corner stones planted that will mark the boundary. But, that the poison does spend its force upon the great nerve-centres there is no longer any doubt; and that it is the primary cause of spotted fever, there can now be no question.

I will here make the statement, that the disease so produced is a distinct and entirely different disease from that of acute inflammation of the meninges of the brain and cord, or either of them, the latter of which is necessary in order to constitute a case of true cerebro-spinal meningitis. This proposition is not simply inferred; it is proven and made evident from numerous post mortem examinations that have been made by different observers in cases of sudden death from this disease; and in persons who have died prior to the sixth day there has never been found any appearance of inflammation, neither have any of its results been manifest; hence, individually, I have settled down in the conviction, that this is not, primarily, an inflammatory disease; and I am further convinced that any inflammatory action that may be developed during its progress is of a special or erysipelatous character, is secondary in its development, and never occurs till after the fifth day from the first decided manifestation of the disease. The action of the poison that produces this disease upon the nerve-centres, is the production of almost complete paralysis of their functions, and, hence, the delicate capillaries of the brain and cord, and their meninges, become, also, paralyzed and unable to carry on the circulation, in consequence of which, their nutrition is disturbed, and the physiological disintegration and molecular formation of new tissue is retarded, which leaves them in a pathological state. These capillary vessels, in consequence of the paralysis, become engorged with blood and pour out the watery contents of that fluid into the unyielding bony cavities, not in the form of an effusion indicative of resolution from an inflammation, but it is poured out by exudation through

these paralyzed vessels, as through a dead membrane; and this not only produces pressure upon the cord itself, but the retained corpuscles and other constituents of the blood that are incapable of exudation tend to accumulate and engorge these atonic vessels, so that they, in conjunction with their exuded contents are capable of producing an amount of pressure upon the nerve-centres that, taken in connection with the poison, could scarcely be considered in any other light than making a death-stroke at their vital functions. This engorged condition of the atonic capillaries is, no doubt, what has given rise to the light pinky appearance of the membranes so often seen after a sudden death from this disease, and misled pathologists to that extent as to cause them to conceive that inflammation had been going on in the tunics of the brain and cord. The pressure that is produced by the exuded serum, assisted by the engorged vessels, is sufficient of itself to destroy the functions of the nerve-centres, independent of any damage that may have been done to the vital forces from the paralyzing influence of the toxic principle which was the immediate cause of the failure of their normal functions. This has been made apparent by all the post mortem examinations that have ever been made; because, in no instance has such examination ever developed any signs of inflammation, either in the brain or cord, or their investing membranes, where the victim has succumbed to the disease in a less time than six days from the attack; but, where the person has survived for from twelve to sixteen days, we then have signs of inflammation present, and such signs too as the disorganization of the great centres by softening, and pus between the layers of the arachnoid membrane and in the lateral ventricles. In private practice it is very difficult to get the consent of friends to a post mortem examination in any case, and in this disease, particularly, where the young are most frequently its victims, they think it seems like sacrilege to submit their dear departed ones to such examination. In army practice, however, the case is different, because it is there made a duty devolving upon hospital surgeons to make all investigations necessary in special cases for the general information of the medical staff, and report the same to the surgeon-general. During the months of March and April, 1862, while I had the honor of having charge of the general hospital at Smithland, Ky., there occurred many cases



of this disease among the invalid Federal soldiers who were left behind, in camp, previous to the battles of Shiloh and Donaldson. Many of those who were attacked died, and as the opportunity was offered I selected the subjects as they occurred, making two examinations of men who died previous to the sixth day, and two of persons who survived till after the twelfth day. The two who died within six days from the time of attack were found to have an unusual amount of fluid in the cavities, and the membranes were of a light pink color, but there was no flaky appearance of the liquid, nor was there any semi-organized membranes in connection with the tissues. The substance of the brain and cord, so far as the unaided eye could distinguish, was, apparently, in a healthy condition. The two, however, who lived to near the sixteenth day showed a very different condition of the substance of the brain and cord. These two cases, about the seventh day began to be feverish and more restless, and the temperature in the rectum showed  $103^{\circ}$  F., whereas previously the temperature had not reached  $100^{\circ}$  F.; their pulse became more frequent, and they had some muttering delirium; neither of them became violent, but remained much in the same condition, their pulse becoming more frequent and feeble as the end approached. One of these patients had convulsions towards the last, and the other had paralysis of one side. The autopsy cadaverica in the one having convulsions showed a sero-sanguineous fluid at the base of the brain and within the spinal canal, and when the cord was lifted from its bed, portions of it dropped off, and the membranes were unusually tender. In the case of the one having paralysis there was slight softening of the Pons varolii, bloody serum at the base of the brain and in the spinal canal, and also in the lateral ventricles—this patient was blind, and the pupils were dilated and insensible to light for three or four days previous to his death.

I am stating these facts from memory, my memorandum having been lost or mislaid before I left the service. These two latter cases were both evidently subjects of a special inflammation which was more allied to that of erysipelatous than that of acute or any other character of inflammation; and this was never set up till on or after the sixth day from the attack, as was evident from the thermometrical range of temperature after that period;



and in both instances it would appear that not only the enveloping membranes, but also the substance of the brain and cord, were attacked with this special inflammation, which went speedily on to disorganization.

And now, independent of these illustrations, it is a conceded fact, deduced from the most careful and accurate observation, that in no epidemic of this disease (so-called cerebro-spinal meningitis) have the reputed antiphlogistic remedies been of any avail; in fact, when they have been resorted to, with the idea of allaying acute inflammation, they have proven worse than useless, and been a direct injury to the patient wherever and whenever they have been resorted to in the treatment of this disease.

With regard to the treatment that we have found most satisfactory in this disease, I will here make the statement, that since 1863, my brother, Z. H. Whitmire, and I, have treated this so-called cerebro-spinal meningitis in accordance with the pathology herein laid down, and that too with the most satisfactory results; more satisfactory, indeed, than any that have been obtained from any other given method. In saying this, I can assure you that we have no routine practice to offer you, nor specifics to recommend, because no two cases are precisely alike; hence the indications to be met in each case will vary in minor particulars, but we always endeavor to keep steadily in view one prominent feature of this disease, and that is, the immediate and fearful tendency to the failure of the vital functions which is apparent in the beginning of every sudden and violent attack. This low status of the vital forces is not unfrequently manifested by a morbidly natural, and occasionally a slow soft pulse, a cool pallid surface, and a general apathy of the patient's movements. This condition is sometimes succeeded by a feeble attempt at reaction and restoration of the vital functions; when, instead of a perfect restoration, restlessness will supervene, and then, instead of the slow measured beat of the pulse that was present at the outset of the disease, it will become frequent and unsteady, but it will still lack the force that an acute inflammation would produce, and the patient may or may not fall into a low muttering delirium. He will never, however, at this stage, be thrown into that wild ungovernable mania that is wont to follow an acute inflammation of the meninges of the brain and cord. A wild delirium, however, may supervene, either on or

after the sixth day, and when it does, it is an unqualified indication of the commencement, setting up and progress of that special inflammation of which I have previously made mention in this paper.

The indications of treatment, therefore, in the commencement of an attack, are to be met with evacuants, eliminants, stimulants, anodynes, tonics, rubefacients, and the hot bath or pack, in connection with the most nutritious food from the commencement, that is capable of being assimilated by the patient. We use evacuants because as a rule the bowels are in a constipated condition, but it is best to use them only to that extent which is sufficient to once thoroughly cleanse the alimentary canal; and that being done, be sparing in the use of purgatives in the after treatment. We may expect favorable results, also, from the use of eliminants on account of their supposed action in facilitating the removal of morbid material from the economy through the emunctories—skin, liver, kidneys and lungs. Stimulants are necessary that the vital forces may be sustained, and thus render aid to the action of the eliminants and enable them to do their work without too great a draft upon the vitality of the system. Anodynes may be used, if necessary to produce rest and sleep, for in that condition there are greater and more successful efforts at recuperation than in any other condition of the system, the value of which, in this regard, would be a work of supererogation to present to the members of these societies. We would use tonics for the same reasons that would lead us to use stimulants; their action is slower, but their ultimate effects are more permanent and the force of the heart's action needs to be sustained. Rubefacients are specially useful in this disease, and more particularly the tincture of iodine, which, besides its powerful revulsive effects, by its absorption from the surface acts as a tonic to paralyzed capillaries and excites the absorbents to action, and may thereby relieve the cord from pressure by the taking up of any fluids that may have been poured out of the vessels, and cause the engorged capillaries to empty themselves into the general circulation, and thus, probably avert the secondary effect of the poison, which is the supervention of a special or erysipelatous inflammation of the brain and cord or their investing membranes.

In case we should be called to see a patient and find him languid,

surface cool or natural, pulse 60 to 70, occasional wandering, or not, as the case may be, constipation of the bowels, an intense pain in the back of the head, neck and along the dorsal spine, and complaining of a stricture about the chest, so as to prevent a deep inspiration, and which causes frequent sighing; we at once order him enveloped in a wet blanket wrung out of *hot* water, and apply bottles of hot water along the spine and to the extremities, or, what is still better and always at hand, we put into a boiler, with water, half a bushel of ear-corn and bring it to the boiling point; we then pile the hot ears along the spine from the nape of the neck to the hips; and also distribute the corn along and about the extremities, and cover both the patient and corn with one or two thick cotton comforters. In this pack we keep our patient from thirty minutes to one hour, occasionally changing the corn so as to keep it *hot* till he is in a profuse perspiration. The patient will not be in the pack more than thirty minutes till he will drop into a quiet sleep, and so we let him rest, sometimes for an hour, quietly changing the corn as it loses its heat, for other ears of a higher temperature, so as to prevent the pack from becoming simply a warm bath. After a reasonable time we take him out of the pack, give him a thorough rubbing with a dry coarse towel and put him into a dry, warm bed; and as often as our patient becomes restless, or complains of great pain, we repeat the pack—not a warm pack—because we consider that the stimulation of the *hot* pack is one of the essentials necessary to meet the indications in the case by relieving the nerve-centers of their engorgement and enabling the functions of animal life to be carried on more perfectly. It quiets restlessness, allays pain, and produces tranquil sleep. The *hot* pack we have often resorted to, three, four and five times during twenty-four hours, to accomplish these objects, and never without producing the most happy effect. It has never disappointed us in its results, and hence we have never had occasion to regret its timely and diligent application. We are not unaware that, under these circumstances, the historical ice-bag has been resorted to with the idea of reducing or preventing inflammatory action, but in our hands it has never appeared of any practical value; on the contrary, its action has rather proven mischievous than otherwise until after the sixth or seventh day, when it is more than probable that a special inflammatory

action has taken place in the brain and cord, or their membranes, or both. After the *hot* pack, we usually advise the administration of a mild cathartic, for the purpose of removing any acrid or other secretions that might prove a source of irritation and disturbance during the course of the disease.

The alimentary canal once cleansed, we then put our patient under constitutional treatment, and for an adult, or during the latter term of adolescence, our average prescription would be: R. Pot. brom., dr. j.; gelsem. fluid ext., dr. j.; ol. terebinth, dr. j.; aqua, oz. j.; syrup simpl. oz. iij. The dose of this mixture is one tablespoonful every four hours. As a stimulant and tonic, to give force and permanency to the heart's action, to aid or facilitate the oxidation of the blood, and to improve the secretions so as to favor the elimination of the poison, we have found the following recipe admirably adapted for that purpose: R. Opii pulv., grs. iv.; ipec. pulv., grs. vi.; quin. sulph., sc. j.; ammon. mur., pot. chlor., *aa* dr. j. Mix and divide into twelve powders, one of which may be given between each dose of the mixture. We also advise the muriated tinct. of iron, to be given in twenty drop doses three times a day from the commencement of the treatment. This would be simply an average prescription for an adult; for children it should be proportional, but the manifest object of the prescription in either case should not be lost sight of, and the intelligent practitioner will often see good and sufficient reasons for many minor changes or additions to what we have here recommended in almost every case he meets. Many cases have come under our care where we have been compelled to resort to the hyd. of chloral for the purpose of inducing sleep, and so far we have never seen any evil consequences resulting from its use. The physiological or therapeutic action of each of the several medicines, herein recommended, is too well known to the profession for me to trench upon your valuable time in a dissertation upon their separate or combined action upon the economy; but it may be well in this place to mention that the acknowledged action of bromide of potassium is specially directed to the brain and spinal cord, and through a reflex influence produced by the drug, the calibre of the capillaries of the nerve-centres is lessened, thus enabling them to disgorge themselves, and probably, like the iodide of potassium, it also stimulates the paralyzed absorbent vessels into renewed activity, so that the supernatant fluid in the cavities is taken up,

thus relieving the brain and cord of the compression to which they have been subjected by their presence. It may not be amiss in this place to also mention that gelseminum is comparatively a new remedy with the regular profession, and its complete physiological action upon the economy is not, probably, fully known; but, in these cases, it seems admirably adapted to allay pain, to compel quiet where there is great restlessness, and to insure sleep; besides, so far as we have observed, while it may lessen in some degree the frequency of the heart's action, it does not in the least abate its force; so that we may safely conclude that the frequency of the heart's action is only abated on account of the tranquility that the drug is wont to produce, and not on account of any direct sedative influence produced upon the nerve-centres and through them influencing the action of the heart and arteries. Therefore we have reckoned this drug as one among our most efficient remedies in this disease; one, too, that, in our opinion, cannot well be dispensed with; because it not only exercises a controlling influence over the cerebro-spinal system, but it induces diuresis and diaphoresis at the same time—a quality that is rarely, if ever, found in any other drug. As a rubefacient, we prefer, by all odds, the tinct. of iodine, which is applied along and on each side of the spinal column twice a day until the skin becomes tender, when we mix it with castor oil, to render its action milder and avoid vesication. From the known action of iodine we expect it to operate as an adjuvant to the bromide of potassium in setting the lymphatic vessels into such activity that the accumulated fluid in the unyielding cavities will speedily be taken up, the pressure removed from the brain and cord, and the vital forces permitted once more to resume their sway.

Finally, Mr. President, and gentlemen, I am exceedingly gratified to be able, here, and at this time, to make the announcement, with becoming modesty, and without any spirit of boasting, that since 1863, we have passed through three most terrible epidemics of this disease within our range of practice; and under this general plan of treatment, my brother and I have not lost to exceed fifteen per cent. of our patients who were afflicted with spotted fever, which we think is a sufficient guarantee to induce us to continue in well-doing, and to recommend this subject to the careful consideration of our professional brethren.

ARTICLE II.—*Waxy Kidney—With Case.* Read before the Chicago Society of Physicians and Surgeons, December 8, 1873. By M. W. WOOD, M.D.

Late in the first quarter of the present century, a discovery was made which marked an era in the history of medicine; I allude to the results of the researches of Dr. Richard Bright, which were first published in London, in 1827, in the first volume of his "Reports of Medical Cases."

Unsatisfied with the little which was known of the real pathology of certain forms of dropsy associated with albumen in the urine, he improved the advantage of his position as physician to Guy's Hospital, and made the investigations which have had the result of giving the name of "Morbus Brightii" to all the various forms of degenerative processes which have been discovered in the kidney.

The different pathological states which are included in this general class are quite various; differing in modes of origin, in morbid anatomy, in symptoms, and in course; and as to where the line should be drawn, between these and other pathological conditions of the kidney not to be thus included, pathologists are undecided; even those who would most sharply make such distinction, differ in the conditions to be included. There is, however, tolerable uniformity existing with regard to the inclusion of an inflammatory form, one of fatty degeneration, one of amyloid or waxy degeneration, and one of cirrhosis.

It being impracticable, within the limits of this paper, to treat of "Bright's Diseases" in general, I shall confine myself to a consideration of some of the more prominent points in the least common of the essentially different morbid processes generally recognized as included under this general term, *i. e.*, the amyloid or waxy degeneration, or, as Niemeyer\* defines it, "parenchymatous nephritis, with amyloid degeneration of the walls of the vessels, for very unusually is the tunica propria, and still more rarely are the epithelial cells affected." Johnson, an eminent authority upon this general subject, says,† "all of the changes of structure commence in the secreting cells of the gland, and are the results

\* Niemeyer. Text Book of Practical Medicine.

† Johnson. Diseases of the Kidney. 1st Edition. London, 1852.



of an effort made by the cells to eliminate from the blood some abnormal products—some materials which do not naturally enter into the composition of the renal secretion." Stewart, another high authority, divides the condition into three stages: of which he terms the first, one of degeneration of the vessels; the second one of secondary changes in the tubes; and the third, one of atrophy.\*

A careful consideration of the subject, however, in the light which general pathology brings to bear upon it, causes a dissent from these views, and forces us to the conclusion that while the normal epithelium still lines the tubules, the protoplasm thrown out is, in obedience to the laws of nutrition, built up into tissues or secretion like those which preceded it; but, the cell-type once lost, the exudate which is being continually thrown out, having now no physiological function to perform, becomes degenerate, and the particular form of degeneration which occurs is that to which the exudate was predisposed.†

True, *atrophy*, *i. e.*, a small, contracted, granular kidney closes the scene in this, as in each of the other forms of "Bright's Disease," though each form is characterized by different anatomical changes; but this fact, though stated generally in the course of their essays, seems to have been lost sight of by our authors in making up their list of deductions, else we would not have had a "Gull-Sutton-Johnson controversy."

The nature of this substance, the result of the degeneration has been variously regarded; thus, Dickinson‡ considers it a variety of fibrin, and Sir Wm. Gull§ speaks of it as a "hyalin fibroid" substance; Roberts says,|| "to call it amyloid is simply a misnomer, and an unfortunate one, as it leads to confused notions as to the existence of ~~some~~ connection between waxy degeneration and the (genuine) amyloid substance found in the healthy liver. \* \* \* That it is essentially a degeneration, and in no sense an infiltration by any ingredient of the blood, becomes apparent on consideration of the parts affected."

\* Stewart. Bright's Diseases. 2d Edition. N. Y., 1872.

† Prof. J. Adams Allen. Lectures on General Pathology. Chicago, 1872-3.

‡ Roberts. Urinary and Renal Diseases. 2d Edition. Philadelphia, 1872.

§ Proc. Royal Med. Chi. Soc. Med. Times and Gazette. London, November, 1872.

|| Op. cit.



The waxy kidney occurs chiefly in persons of a strumous diathesis; and more often in males than in females, because they are more exposed to its exciting causes; for the same reason, adults are more particularly liable than children; and, of adult males, those whose occupation is one of exposure to wet and cold.

The disease is generally symmetrical; that is, both kidneys are more or less affected, though the disease is frequently more advanced in one kidney than in the other; cases, nevertheless, have been reported, where one kidney was in an advanced state of degeneration, and its fellow normal;\* in such cases, however, there is albuminuria, but no dropsy.†

The symptomatology of this disease merits our careful attention, but a consideration in detail of the various symptoms would be too tedious, and a few, only, of the more prominent ones will be presented; noticing, however, in passing, that its insidious approach, steady progression, and probable duration, are pointed out by various morbid appearances, which also give us valuable guides as to treatment.

*The Anasarca.*—This, which led Dr. Bright to his important discoveries, is generally the first to induce the patient to seek advice, and directs attention to the real trouble, as in the case which I am about to relate. The rate of development of the anasarca may, as Johnson says,‡ “be at any time measured by the rapidity with which the imprint of the finger is effaced from the edematous surface;” an observation which will be borne out by the testimony of those who have carefully observed this phenomenon. The anasarca seems to depend upon:

a. The amount of destruction of gland-tissue, as anasarca makes its appearance only when there is no longer sufficient kidney structure intact to separate the urinary excrementitious substances.§

b. The amount, and rapidity of accumulation of these substances in the blood.

c. The density of the blood-serum; and here it may be noticed that there is a definite inverse ratio between the coagulability of the urine and this density.

\* London Path. Soc.'s Trans., Vol. 19.

† Harley. The Urine and its Derangements. Philadelphia, 1872.

‡ Op. cit.

§ Harley, op. cit.

d. The amount of capillary obstruction; and it should be borne in mind that the flow of blood through the capillaries is to a certain extent affected by the composition of the blood itself; it being a well known principle of physics that fluids pass readily through capillary tubes for the walls of which they have an affinity.\*

e. The amount of urine voided; it being obvious that the danger of anasarca is lessened in proportion to the amount of diuresis.

*The Appearance of the Patient.*—Together with the pasty look of the face, there is a pallid or dingy hue of the skin, of which Dr. Loomis remarks:† “It is peculiar; not like the clear pallor of phthisis, nor the dingy pallor of cancer; not easily described, but peculiar to ‘Bright’s Disease,’ and easily recognized after it is once seen.” Stewart‡ also calls attention to a peculiar characteristic appearance of the face, which he has observed, “when the surface generally is pale and clear, but a very distinct congestion exists over the cheeks; not a congestion like a blush, but one which is seen by the naked eye to depend upon the distension of small vessels, quite above the size of capillaries.”

*The Urine.*—Albumen is the most common and most important of the abnormal ingredients of the urine, and though it occurs in various diseases, its presence, aside from “Bright’s Diseases,” is transient, and the quantity small. When we consider the fact that of all animal substances, albumen possesses the greatest endosmotic power, and must, together with the water and salts, pass from the malpighian capillaries, it seems somewhat strange that it does not appear as a constituent of normal urine; but in its passage through the tubule, it must subserve some further nutritive process, or receive some transformation by contact, either with the cells of the tubule, or with the solid excrementitious portions of the urine which are separated from the inspissated blood of the second set of capillaries.§

Of the urinary constituents, urea is also of great importance, as a measure of the activity of the general process of disassimilation—the wear and tear of the system.|| Since its discovery in 1771, by Hillaire Rouelle, there have appeared in our literature numerous

\* Prof. J. Adams Allen, op. cit.

† Prof. Alfred L. Loomis. N. Y. Med. Record, May 1st and 15th, 1873.

‡ Op. cit.

§ Vide Harley, op. cit.

|| Harley, op. cit.

and valuable observations upon this subject, with this conclusion as a general result: that urea, though found in the urine, is not formed by the kidneys, but that those organs merely excrete it; that it is not the special product of any particular substance or organ, but one of the products of the retrograde metamorphosis of all nitrogenized tissues.\* In the diagnosis of this morbid affection, there are to be taken into consideration:

- a. The mode of invasion; was it insidious.
- b. The condition at onset; as this form never occurs as a primary disease in otherwise healthy persons, but as a sequel always.
- c. The etiology; as if it be fairly due to syphilis, to scrofula, to long continued suppuration, to caries or necrosis, or to any other wasting malady, it is presumably waxy.
- d. The prominent symptoms; as if polyuria has existed from the beginning, we should, judging from this alone, be compelled to class it as waxy. Of this symptom, a distinguished author remarks:† "it is an unfailing symptom at the early stage in the waxy form, and is absent only when inflammation becomes super-added, or diarrhœa is draining the blood of fluid."
- e. The existing complications; the most common concomitant affections being a similar degeneration of the liver and spleen.

The great difficulty in diagnosis, however, is not so much in determining the form, as the stage; and for this we must depend upon our knowledge of the anatomical changes which are taking place in the kidney, as determined by:

- a. The color and amount of the urine.
- b. The amount of albumen; which early is scanty, later abundant, and still later again scanty.
- c. The sediment; and its character as revealed by the microscope.
- d. The size of the casts; it being evident that the cast formed in a tube which has been deprived of its epithelium, is larger than one from a tube not so denuded.

Of the importance of microscopy in this disease, Aitken says,‡ "without a microscopic examination of the urine from day to day, it is impossible to distinguish between a case likely to improve under treatment and one that may be regarded as hopeless, and

\* Harley, *op. cit.*

† Stewart, *op. cit.*

‡ Science and Practice of Medicine. 4th Edition, Vol. 2, p. 163.

without the daily use of the microscope, treatment becomes at the best but guesswork."

The pathology generally received is: that there is an amyloid degeneration occupying the place of the tubal epithelium; an amyloid or "*hyalin fibroid*"\* degeneration of the walls of the blood-vessels, as follows:

1. The intertubular, or second set of capillaries.
2. The intercapillary vessels, or venules.
3. The malpighian capillaries, or capilliculi.
4. The afferent vessels.

Thence extending around the convoluted tubes, and malpighian tufts: that this substance subsequently contracts, and draws the malpighian bodies together; compresses the uriniferous tubules, and may entirely obliterate them: that this compression interferes with nutrition and tends to atrophy. And some pathologists regard this amyloid matter as a source of irritation, causing proliferation of the intertubular connective tissue,† and thus the production of a cirrhotic kidney, at the close of a history of waxy degeneration.

Of the complications most commonly presented, we learn from Stewart,‡ who has statistics of a large number of cases, that waxy degeneration of the liver exists in from seventy to eighty per cent. of the cases; waxy degeneration of the spleen in from seventy to eighty per cent., (Roberts§ says he found it in forty-eight out of seventy-seven cases); waxy degeneration of the alimentary tract in about fifty per cent.; pulmonary tuberculosis in about one-half of the cases; caries and necrosis in from ten to fifteen per cent., and that diarrhoea from vicarious elimination is quite common. The prognosis may be summed up in a single word—unfavorable.

The treatment of renal structural disease in any form, has not long been regarded as very promising; but increased powers of diagnosis, and the great advance made in the knowledge of their pathology have at least enabled us to separate those that we may regard as curable, from those the severity of which can at best be but mitigated. To be at all successful in treatment we must be correct in diagnosis; and not, having found a name for the disease, cease our endeavors to ascertain its cause. As we cannot, unfor-

\* Proc. Royal Med. Chi. Soc. London, November, 1872.

† Phil. Med. Times, March 22d, 1873.

‡ Op. cit.

§ Op. cit.

tunately, procure physiological rest for these organs, we endeavor to make their task an easier one, by lessening the amount of labor to be performed, and inducing vicarious action of the other emunctories, and thereby at least gain time, which often becomes an important element of treatment. The perspiration, even in health, contains urea, chlorides, phosphates and sulphates;\* and in disease even the insoluble oxalate of lime is sometimes found in considerable abundance.† The urinous odor of the perspiration and breath has been often noted, and urea found in considerable abundance in the intestinal evacuations; it may appear, says Harley,‡ “in all of the fluids of the body.” Thus, as elsewhere, the teachings of physiology furnish us with a key to the proper mode of treatment. In this condition, the indications for treatment obviously are:

- a. To check, if possible, the progress of the degeneration;
- b. To prevent the addition of complications, particularly inflammatory ones; and
- c. To palliate, as far as possible, the more troublesome symptoms.

And these indications we seek to fulfill by measures therapeutic, dietetic, and prophylactic.

The therapeutics seems at best but doubtful; remedies we doubtless have, but we lack the knowledge and skill to apply them, “no medicine having yet been discovered which would produce any direct effect upon the waxy degeneration itself.”§

The first of these indications can be but poorly met. If we remove from the tubes, by any means, the obstructive exudate, which is constantly provoking degenerative inflammation, and hindering elimination by preventing secretion, we do all that we can hope to do, and for this purpose we have a remedy, digitalis,|| as it will increase the secretion without stimulating the kidney,|| as it will render the heart’s movements more strong, energetic and regular, augment the arterial tension, increase the fullness and force of the pulse, contract the arteries and arterioles, and moderate the number of pulse beats in direct proportion to the elevation of

\* Austin Flint, Jr. Physiology, 3d Volume. N. Y., 1870.

† Harley, op. cit.

‡ Op. cit.

§ Stewart, op. cit.

| Loomis, op. cit.

arterial pressure;\* bearing in mind that digitalis has no influence upon the lamina of normal vessels.† This remedy was the one originally recommended by the distinguished discoverer of the malady, who gave it in combination with the bitartrate of potassa. It may be given in infusion, in small doses, often repeated, until its effects are produced; then in larger doses, at longer intervals, to continue the effect.

In belladonna we have a powerful adjuvant to the remedy already considered; it does not lower the temperature as digitalis does,‡ but it increases the contractions of the heart and arteries and produces an increase of temperature throughout the body, without increasing the respirations, or interfering with them, save in the production of an occasional yawn or long-drawn sigh; this phenomenon in the case of my patient so alarmed his mother that she sent for me with a message that he was dying, at a time when he was comparatively quite comfortable. This medicine is rapidly eliminated by the kidneys, increasing the elimination of urea as well as of the phosphates and sulphates; but the urea is increased out of proportion. It has, besides, a direct effect upon the amount of albumen in the urine; Stewart§ says, "as soon as the constitutional effect appeared, the albumen diminished, and in the course of a month it could be discerned only by careful testing; that this was really due to the medicine, and not to the natural progress of the malady, was proved by the fact that, the medicine being suspended for a week, about the middle of the time the albumen increased."

In elaterium, when it is not contra-indicated, we have another powerful aid to the fulfillment of this indication, as it is eliminative of the urea, which has been found in abundance in the stools produced by it.¶ These stools are copious and watery, and have been well compared to water in which meat has been partially boiled.¶ Colchicum and guaiacum are also powerful eliminatives of urea.\*\*

\* Dr. Gourval. *Gazette Medicale*, December 30, 1871. In *New Remedies* for April, 1872.

† Dr. Rudolph Boehm. *Pfluger's Archiv.*, Feb., 1872. In *New Remedies* for July, 1872.

‡ Waring. *Therapeutics*.

§ Op. cit.

¶ Bird. *Urinary Deposits*. 5th Ed.

¶ Waring. *Op. cit.* \*\* Bedford. *Diseases of Women and Children*.

The second indication is to be met by prophylaxis chiefly; the patient should remain in bed, in a temperature moderate and uniform; especially is this necessary during cold weather, when careful watching to prevent exposure to sudden draughts of cold air, is also necessary.

Flannel should be worn next the skin. The diet should be plain, easily digestible, nutritious, and unstimulating; in most cases, also, it will be proper to abstain from sugar;\* tea and coffee without sugar may very properly be allowed, as both increase the excretion of urea, while alcoholics and beer should be avoided, as their effect is just the reverse of this.†

Great thirst is frequently complained of, and is satisfied, if at all, only by large draughts; and if it be first carefully explained that over-indulgence will produce unpleasant effects, the patient may generally be allowed to use his own discretion in the matter of drink; as, says Watson,‡ “he is better able than his physician to judge which evil is the greater—the torment of unslaked thirst, or the misery produced by over-indulgence.”

The third indication is to be met chiefly by means already pointed out; for the treatment of the ascites so often present in these cases, and probably dependent upon the hepatic complication, elaterium offers a greater prospect of success than any other known remedy; though serviceable in other dropsies, it is particularly so in this; Stille§ says, “in cases of abdominal dropsy which resist these remedies [referring to diuretics], as too many will do, a more certain resource is offered by elaterium.”

The anemia calls for the administration of iron, and of the ferruginous preparations the tincture of the chloride seems the most eligible, as, besides, it checks the drain of albumen.

I will now briefly recount the history of a case, from my notes taken at the time:

*Case.* H—— M——, aged 18 years; born in Buffalo, N. Y., of Irish parentage; first saw the case October 31st, 1873. Prior to present illness had been generally healthy, though of a marked scrofulous diathesis, as are all the other members of the family, *i. e.*, widowed mother and three other children.

\* Prout. Stomach and Renal Diseases. 5th Ed.

† Harley. Op. cit.

‡ Practice of Physic. 4th Ed.

§ Therapeutics and Materia Medica.



In the summer of 1866, while at play, he leaped to the ground from the roof of a one-story school-house; was stunned, as might have been expected. For some time afterward nothing in particular was noticed, except that he had become deliberate in his movements, and soon he began to drag his feet as he walked, or shuffled along. Polyuria existed from the date of the injury. He has, during the seven years which have since elapsed, been under treatment continuously by various physicians of all schools. Has, as his mother says, been treated *principally* for: big liver; big kidneys; worms; *dropsy*; broken back; and abscesses, of which he has two, one discharging on the inner aspect of either thigh.

It appears that a short time (?) after the injury, a lumbar abscess proper (*i. e.*, in the posterior chamber of the lumbar fascia) was noticed, which ran its course; later the two psoas abscesses appeared almost simultaneously, and have discharged continuously ever since, during which time the bodies of *some* of the dorsal vertebræ became involved, and a very decided anterior curvature has resulted from the Potts disease.

On examination he presents a leuco-phlegmatic aspect, and the peculiar pallor of which I have spoken; general nutrition of body poor, very much emaciated; in bed, in a sitting posture, unable to assume any other on account of the orthopnœa, which is very troublesome; is anasaruous markedly, and, besides, has ascites; abdomen much distended, smooth, white, and shining; temperature  $96\frac{1}{2}^{\circ}$  F. (morning temperature) and apparently cooler; skin dry; pulse 90, irregular, small, and weak; respiration 18, and normal in character, if the position be not taken into account; appetite very good, eats almost anything, and appears to enjoy his food; thirst not at all excessive; bowels a little loose but regular; stools normal in appearance, but smelling very badly; urination not at all painful; amount passed in 24 hours, about 20 oz., sp. gr.  $1011\frac{1}{2}$ , of a pale straw color; the natural urinous odor replaced by a faint, unpleasant one; albuminous, the coagulum being one-fourth the height of the quantity tested; on microscopic examination the urine was found loaded with uric acid and phosphates, amorphous and crystallized; sediment consisting largely of large, pale, hyalin casts, averaging in diameter about  $1-1800$  in. (camera lucida); some disintegrated *tubal* epithelium, a few disintegrated blood corpuscles, together with the uric acid and phosphates al-

ready alluded to. The patient, aside from the orthopnœa (avoided by position), and the annoyance caused by the discharge from the abscesses, seemed quite comfortable, not at all restless, somewhat drowsy, but generally cheerful and contented.

No particular pain was complained of. Paralysis of both lower extremities was complete, showing that the spinal cord had become involved; the bladder and rectum were, however, uninterfered with. The heart was found somewhat hypertrophied, but gave no further evidence of disease. The liver was found slightly enlarged; its lower border and surface nodulated. The area of splenic dullness was increased, but, owing to the ascites, its size could not be accurately made out. I regretted that I could not avail myself of the means suggested by Dr. Stewart\* for diagnosing the splenic degeneration. Resonance on percussion over both lungs was normal, and auscultation gave no evidence of disease. The penis and scrotum were œdematous.

My diagnosis was: Waxy kidneys, liver, and spleen; consequent upon the prolonged suppuration from which he had suffered; and that the concussion was the exciting cause of the first manifestations of morbid action, to which the others were but sequelæ.

I gave him a mixture composed as follows:

R.	Fl. Ext. Belladonnæ,	.	.	.	m. xxjv.,
	Fl. Ext. Colchici Rad.,	.	.	.	f. dr. jss.,
	Tinctura Digitalis,	.	.	.	f. dr. iijss.,
	Syr. Aurantii Cort. Dulc.,	.	.	.	ad f. oz. ij.,

M. Sig.: Teaspoonful ter in die.

Under the influence of which the general dropsy disappeared, save from the ankles, feet, and genital organs, the ascites partially remaining; his condition was now rendered more endurable, as he could lie on his back or on either side at will. The bowels became a little more loose, and his condition seemed improved. I say seemed, because it was apparent that the powers of life were nearly gone; he sank gradually, and died on the morning of November 28th, 1873. An autopsy was persistently refused. This I regretted very much, as I wished and expected to present

\* Lecture on Waxy Kidney. Med. Times and Gazette, London, June 13th, 1873.

the specimens, having neglected to make either drawings or permanent preparations of the urinary sediment, or a careful quantitative analysis of the urine.

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ARTICLE III.—*Review of the Article entitled "Infants and their Food."* By G. NEWKIRK, M.D., Low Point, Ill.

The paper in question published in the March No. of the CHICAGO MEDICAL JOURNAL appears to me to call for a few comments by way of criticism. It commences with the report of a case, which is at once interesting and instructive, the description thereof being well written. The previous treatment of the case was properly criticised, and the course of diet and regime directed by the author, eminently proper under the circumstances as described.

We can readily understand how with natural food and sleep "came the angel of health and brought joy to the parents, life to the sufferer, and to him a great lesson," but we may fail entirely to see the legitimate fruits of such lesson in that which follows from the author's pen.

Let us see. A child is deprived of all proper food and as a matter of course it starves! The physician finds it in a starving condition, being *dosed* but not *fed*! Milk—"cow's milk from the pan"—without any addition to or subtraction from it, fresh from nature's laboratory, is given, threatened failure of the powers of life is averted, and the functions of growth renewed. That the preceding attendant had failed to discover the simple condition of starvation, and prescribe the still more simple remedy of food, was certainly to his discredit. That our author did what his predecessor had failed to do, speaks well for his practical sense.

But we cannot from the author's observation of this case infer that the addition of sufficient water to the milk used for the purpose of equalizing the relative proportions of fluid and solid, in accordance with the constitution of human milk, or that the addition of two per cent. of sugar would have been otherwise than beneficial; neither that the addition thereunto of sweet almond or cod-liver oil—both so liable to detestable adulteration—as recommended by the author further on, would have not proved injurious. We are

decidedly of the opinion that *no addition* would be far preferable to that which he recommends but does not tell us he has tested practically.

Every member of the profession must have seen results equally tangible with those here reported where the usual additions were made. When we come to consider quantitative analysis we can only approximate a standard with regard to organic fluids. Circumstances of a varying nature, such as diet, exercise, emotion and constitutional tendencies, must always vary the constitution of the secretions, including milk. No two chemists can give us the same tables, and for obvious reasons.

Liebig gives us a general and simple analysis, classing together the sugar and the oils as follows:

	Nutritive.	Respiratory.
Cow's milk contains, . . . . .	10	30
Human milk contains, . . . . .	10	40

## (Attfeld.)

	Water.	Solids.	Casein.	Sugar.	Butter.	Salts.
Human, . . . . .	889	111	40	44	27	2
Cow, . . . . .	864	136	55	38	36	7

## (Pereira &amp; Lehmann.)

	Water.	Casein.	Butter.	Sugar.	Salts.
Cow's milk, . . . . .	870.2	44.8	31.3	47.7	.6

## (Simon.)

	Casein.	Butter.	Sugar.	Salts.
Human milk, . . . . .	35	25	48	2

Observe what wide differences! According to Pereira & Lehmann the proportion of casein in cow's milk is represented by 44.8, according to Simon, 68; a difference of 23.2! By balancing the different tables as nearly as we may, we arrive at the following conclusions: 1st, that the excess of casein in cow's milk as compared with that of woman is about twenty per cent., or about eight parts in 1,000; 2nd, that sugar is *deficient* in nearly the same ratio; 3rd, that the amount of fat is about equal—according to Attfeld we see that the balance stands very much in favor of the cow's milk. According to Simon (whose table our author quotes) the amount of butter in human milk is but 25 less than any authority I can find gives for cow's milk.

The amount of butter contained in milk varies greatly in different animals of the same species, as all butter makers know. The butter making qualities of the cow do not depend so much on the *quantity* as the *quality* of her milk. The *quality* is, in turn, dependent on two conditions, viz., *amount* of cream or butter, and the proportion of its oils. The last of the milking is richer in butter than that first drawn.

The ratio of the solid to the fluid increases with the age and requirements of the animal to be nourished; therefore, other things being equal, the milk of the farrow cow is richest in tissue-making substances, more especially of casein.

In the healthy human being corresponding conditions must naturally obtain. A gradual change must ensue in the wants of the growing child, and the constitution of its food should in the nature of things bear a gradual modification. Nature here takes the initiatory by gradually increasing the *quality* of milk to meet the requirements of increasing strength, while *quantity* is diminished to admit the digestion of other and more solid aliment. Bear in mind, however, these rules hold good in the healthy mother only, who has not been reduced in strength by multitudinous cares and labors, or an impoverished diet superadded to a prolonged lactation.

Again, we notice that all authorities agree, with but little variance, as to the disproportion existing in the amount of sugar in the two kinds of milk. This disproportion is probably less varying than that of any other element contained in milk; the tables at my command varying from 31 to 38 in that of the cow, and from 44 to 48 in that of woman, showing a difference of about twenty-five per cent.

The young infant relies upon milk for both food and drink; hence it is important that the proportions of fluid and solid should correspond with its wants. We add a little water to make good these proportions, and not, as our author observes, for the purpose of "diluting casein." However, it is not true, as he states, that casein in milk is not dilutable with water; alone it is not, but in milk it is in a compound with soda, hence as divisible as any salt already in solution. (Youman's Chemistry, p. 390.) As to the exact quantity to be added, experience as well as sound philosophy justifies us in being governed by the age and general health of the

child, as well as its digestive tone. As a rule, the strength of food upon which the child will grow, and bears without vomiting or diarrhœa, is for the time being proper for it. With increasing age, quality as well as quantity should be increased. We do not add sugar, as our author states, to promote the digestion and assimilation of casein, but simply and alone to supply a want, and in such proportion as nature demands. We presume that whatever nature furnishes in the mother's milk, she has use for in the system of the child, both in amount and kind. Just how sugar is assimilated we cannot tell, but this we know, that it is *essential*; a *carbo-hydrogen*, hence, respiratory, and a brain and nerve food; that as an aliment it can largely take the place of fat.

Inasmuch as the young and nursing infant eats no starch—out of which sugar is made—nature provides the sugar of milk, and if we accept and follow out her teachings we are bound to supply at least an equal amount to the hand-fed child. In accordance with what seems to be the physiological indications here set forth, we find the natural appetite craving sugar. If a natural and unperverted appetite is in any instance to be relied on as an indication of systemic wants, certainly it may be here.

We have yet to learn that simple redness of the mucous surface, which always occurs during digestion, is an inflammatory indication, as stated by the writer. The author should certainly be able to draw a distinction between inflammation and a physiological afflux of blood, ever taking place in the part temporarily called into increased activity.

We heartily concur with him in his denunciation of elixirs and all unknown and advertised compounds; have no objection to the theory of Lehmann, "that a certain, though small quantity of fat is indispensable to the metamorphosis and solution of nitrogenous articles of food during the progress of gastric digestion;" adding, however, that there can be no doubt but the "small quantity" can be found in fresh cow's milk at any time, and without the addition of sweet almond or cod-liver oil.

Considering that the study of carcinoma and tuberculosis cannot properly be entered into in a paper of this kind, and that the random shots taken by the author at these and various other questions are far from the mark of the high calling in which he thinks himself engaged, we will pass them by and proceed to

notice his experiments with bottles and milk. We will repeat his statement of them briefly:

- No. 1. Cow's Milk, with vinegar.
- No. 2. " " " almond oil and vinegar.
- No. 3. " " " water (half and half) and vinegar.

He then proceeds to tell us that "in No. 1 the casein separated slowly from the whey and settled on the bottom of the vial," (mark the emphasis), "the precipitation being not quite complete."

"In No. 2 the casein separated completely, but the *coagulum was decidedly more flocky, and, what is very remarkable, it floated on the clear whey.*" (Mark the emphasis.)

In No. 3, according to his observation, precipitation failed to take place.

*Remarks.* The rapidity and completeness with which coagulation of casein takes place under these circumstances depends upon the amount of acid added; in this case it was insufficient, "precipitation being not quite complete." In the repetition of his experiment by himself he states that there was a more distinct separation, owing to the increased amount of vinegar added. Casein thus precipitated has scarcely specific gravity enough to carry it downward; again, it holds a large portion of the butter entangled in its meshes, which tends to float it; however, if left undisturbed, it finally settles to the bottom of the vial.

In No. 2 we deny that coagulation could have been any more complete. Let any one make the test and see for himself the fallacy of the author's deductions, so called. We can easily account for the fact which the author considers so very remarkable, viz.: that "*the coagula floated on the clear whey.*" The oil of almonds, in addition to the butter, becoming admixed or entangled with the flocky precipitate, floated it to the top, as we will make plain a little further on. There were not two distinct precipitates, one which floated, and the other which fell; finer flakes or more regular in outline, or which were first at the bottom when coagulation commenced, failed to entangle sufficient oil to float them, and, as in No. 1, slowly fell.

In No. 3 we are utterly at a loss to understand how the gentleman could so fail in correct observation.

In order to thoroughly test the correctness of the author's theories, as well as his facts—so called—let any one who will, institute



the following experiments : Add to an ounce of fresh milk twenty drops of almond oil and sufficient vinegar to coagulate the casein. If the mixture is shaken while coagulation is going on, or afterward, the oil will float the curd, or the principal part of it. If the mixture stands for a few moments previous to precipitation, the oil will quickly find the surface and the coagula will slowly settle. The same amount of vinegar added to the milk without the oil will just as readily throw down the curd, and there will be no difference in the appearances of either curd or whey as compared with the first experiment. We took skimmed milk, from which nearly all the butter had been taken ; to three drachms of this we added four drachms of water and two scruples of vinegar, and coagulation at once took place, leaving the transparent water and whey. We repeated the experiment with *one drachm of skimmed milk to six drachms of water*, and this, with a few drops of vinegar, precipitated more rapidly than the first ! There was no difference in the appearance of the precipitate ; it settled more readily, not because it was heavier, but because there was very slight, if any, admixture of *oil*. In either instance, on the addition of a small amount of oil after coagulation and the mixture being shaken, the oil would carry the curd upward and retain it there. According to the author's idea the precipitate resulting from such a quantity of menstruum would have been too heavy to float.

Thus we find that our friend's experiments prove nothing. With all due courtesy we must beg leave to remark that his facts—so called—are as false as his theories. The article in question only goes to show how far a little knowledge—diffused surface reading—with a few coincidences and a disposition “to revolutionize,” may carry a sensible man toward the climax of absurdity even unto the claimed demonstration of absolute nonsense.

To conclude, we maintain our adherence to the following rules :

1st. That casein in milk is dilutable as well as other solid constituents, and that ordinary dilution does not interfere with digestion ; therefore, that it is proper to dilute cow's milk with water in proportions varying according to the age, health, and digestive tone of the child to whom it is to be fed.

2nd. That the addition of sugar to make good the percentage as in human milk, is proper, physiological, and necessary ; that it does not tend to intestinal irritation nor interfere with digestion,

even though given in slight excess of the actual requirements of the organism, being easily appropriated and of an unirritating nature.

3rd. That no addition of any extra fat is necessary to cow's milk when properly selected; that if any should be given it should be in the form naturally belonging to milk, viz., cream; that the milk last drawn from the cow contains as much and usually more fat than human milk.

4th. That, while the system of the infant may reject and dispose of as residue any supply of proximate principles moderately in excess of its wants, it *cannot supply an absolute deficiency*. Supply should at least be equal to demand.

Finally, we wish to express our admiration of the sentiment quoted—"The hand that rocks the cradle is the hand that rocks the world"—whether it be that of noble woman, the boy who has nothing else to do, or the baby who is old enough to rock itself. We think the sentiment more applicable, however, to Him who rocks the cradle of the deep.

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ARTICLE IV.—*Review—Chicago Medical Journal, April, 1874.* By a Country Contributor. [Z. C. McElroy, M.D., Zanesville, O.]

The opening article, the Valedictory Address of Prof. Miller, contains a very admirable *resume* of the results of modern scientific and philosophic researches and investigations, stated explicitly, and in many parts eloquently. It should have commenced with the first paragraph on page 195. The statement made on page 200, that the doctrine of evolution excludes creation and theism, is only true when limited time is admitted as a factor. But as time, so called, is only the relative position of the moving heavenly bodies to each other, it is not properly a factor in the premises at all. "God pays in full, but not every Saturday night," is a homely way of excluding time from some of our calculations. "The mill of God grinds slow, but fine," is another mode of expressing the same idea.

The Professor has evidently not paused to study patiently, and in all its bearings, in the light of modern science, the quotation he introduces from the Bible, on page 201. Nothing is said about time in it; not likely to be an accidental omission in the inspired text.

The first paragraph on page 198 should have quotation marks at its commencement, and after the interrogation point at the end of the second paragraph, and possibly at other places.

Prof. Miller, like some clergymen, seems not to have known when his address was ended, or at least that part of it extending from pages 193 to 202, relating to the conservation of energy, or he would have omitted all on pages 202 to 205. He had said enough to arouse the attention of his graduating class to apply themselves to the work of ascertaining how far and to what extent the great truths he had just stated would affect practical medicine. There he should have left them, each free to work for himself. Instead of that, however, he points out lines of investigation which must bring them back into the same old ruts from which they started. Better for them it would have been had he told them, in the language of Helmholtz, "*Wer bei der Verfolgung der Wissenschaften nach unmittelbaren praktischen Nutzen jagt, Kann Zeimlich sicher sein dass er vergebens jagen wird.*"\*

It is to my mind a great blemish on an otherwise really excellent and thoughtful address, to have made such statements as those in regard to the "chemistry" of "disease," as well as the "poisons" that cause them, and the chemical means of "cure," which appear in it.

Everything pertaining to living beings and things merge themselves into questions of materials, forms of organic structure, and the forces concerned, or modes of force concerned, in their evolution, and decay or loss. "Disease," "poisons," and "cure," are words which appear very properly in "Good's Study of Medicine," but are certainly out of place in casting the horoscope of medicine in the presence of the great general principles he had just annunciated.

On the whole, the address is excellent, and but for these defects, would do credit to any professor in any medical school in existence.

The second article—Myelitis—by Professor Hay, a model of exact and careful observation, and record of results, is introduced to settle a diagnostic point—for the case has already been

\* "He who in the pursuit of science seeks directly practical applications, can be pretty sure that he will seek in vain."—*J. Matthews Duncan, Address at Edinburgh, December, 1873.*

reported under another name—supplying evidence for the ten thousand millionth time, that to map, and fix with exactness, the disturbances of the moving equilibrium on which life depends, has always been a failure in the past, and will continue to fail to the end. Doubtless Prof. Hay is right in his diagnosis so far as he goes, but he falls short of “the whole truth;” to show which, it is only necessary to inquire if the balance of the patient—excluding his brain and spinal cord—was well. His exact observations show conclusively that the disturbed equilibrium of the patient’s brain and spinal cord was only an incident in the disturbance of the forms of organic structure, and the equilibrium of motion in his structures generally. Was the “myelitis” a cause, a consequence, or coincidence of the universal disturbance of structure, and motion in structure, as evidenced by the changes of function recorded by him?

The facts probably were, that there were wide-spread modifications and losses of “function,” which would not and could not have been the case had the patient’s structures had their normal molecular arrangement of material, and motion of material. The mean of the various velocities of motion in his structures, as evidenced by his temperature, was natural, and that was about the single feature the patient presented that was so.

The neighboring “practitioner,” incidentally called in, who prescribed very properly for the “disease”—pain—evidently without studying the case, was, doubtless, and unintentionally, instrumental in hastening the end. It occurs to me, however, that in the professional management of the “disease” the patient was partially, if not wholly, lost sight of; affording evidence, again, of the misleading character of the “London College’s” map of 900 separate and distinct “diseases,” so recently published, and so widely respected. The real state of things existing at the time of Prof. Hay’s first visit, or connection with the case, was that structural forms of material were extensively lost, or changed, as evidenced by changed and lost functions, so concisely described by him.

The original or remote cause, in all probability, of this derangement of structure, was a failure on the part of the patient’s structures themselves to provide for their own reproduction from new material as they were wasted by function; or a failure of the

"lymphatic system" to collect the material in which living structures store up the so-called "vital force," and restore it, with new material, at the proper time and place, near the right auricle. This is rendered all the more certain by the patient's age, 65, for at that time of life the structures are naturally "failing," and if they did not fail, none of us would ever grow old, or die—we would be immortal.

From Prof. Hay's admirable description of lost and modified functions—behind which there were modifications, or loss of the natural structural arrangement of material—it seems to me that the primary failure was in the lymphatic system. The patient's age, the season of the year, etc., all point in this direction.

The third article, by Dr. Stewart, abounds in evidence of the mistake made when the "disease" is the object of professional management, instead of the patient. It is so easy to play marbles, and so difficult to play chess, especially with a skillful opponent. We take up this marble—some drug or medicine or combination—and "plump" it at the "disease;" if it misses, try another, and so on. Why not? As the boys say, "aint there fun in shooting, whether you hit or miss?" Not so in chess. Like the effective work in nature this is played in secrecy and silence, the results, in the motions of the "men" are only apparent.

In Dr. Stewart's case there was from the first hopelessly lost or modified structural arrangements of the materials of his patient's body. He played marbles with it, and failed to win the game. Had he played chess, with Stricker, and Rindfleisch, and Van der Kolk, as instructors, his patient would have taken less "drugs and medicines," and his professional interference would have been confined to "possibilities," or "probabilities," with less "chance" in the game. Modifications, or loss of the normal structural arrangement of living bodies, upon which function depends, cannot always be restored by "drugs and medicines." All the positive evidence on the subject is in the negative. Symptoms and appearances may sometimes favor such a "belief," but external demonstrations are against it. The "scars" alluded to on page 227 (No. 7) do not favor such a "belief." Amputated limbs are never reproduced. Opacity of the lens in the eye is only remediable by mechanically removing it.

Still, working in the accredited channels, Dr. Stewart treated

his patient industriously, if not successfully. I do not censure him. Twenty years since, in accordance with my instructions, I treated "diseases." Now, I regard my patients as altogether of more importance than their "diseases."

The fourth article, by Dr. English, is only interesting as showing just what has happened in the development of a foetus when some of its "organic forms of structure" were left out, in consequence of deficient or misdirected force.

#### PROGRESS IN MEDICAL SCIENCES.

The first article, Neuro Pathology and Psychological Medicine, by Prof. Hay, is a statement of the "conclusions" of Dr. Mendel in regard to "differentially" diagnosing typhus from insanity, affording evidence, again, of the utter inutility of efforts to affix exactness to the shifting and ever changing phenomena when the equilibrium of health is disturbed in different bodies, no two of whom ever were or are likely to be "exactly alike." The facts in regard to typhus and insanity are, that in both there is always disturbance of structural arrangements of material, and sometimes loss, as evidenced by changed or lost functions. Dr. Barnes, in his recent work on "The Diseases (?) of Women," says, in regard to "neuralgia" of the uterus, "histeralgia," etc., that they are terms calculated in their use to "lull the spirit of inquiry by fostering the belief that they embody a pathological entity." And so of typhus and insanity, "they took their rise at a period when the precise and minute investigations at present in vogue were comparatively unknown," (Barnes, p. 99,) and therefore "no longer satisfy any but those who are satisfied with the imperfect pathological knowledge of the past."

2. Dr. Eulenberg's case, again, shows not a "disease," but a modification of the structural arrangement of the tissues of a boy by mechanical violence, as evidenced by permanently changed functions.

3. So of Dr. Charcot's observations; all concur in showing changes, or loss of the structural arrangement of material, behind changed or lost functions.

4. Prof. Ferrier's physiological experiments, in their results, point to the same general facts.

5. Dr. Hallock's suggestions in regard to hospitals for the insane are in accordance with the experiences of our late war, that barracks, or hospitals, not for the insane alone, but for all other sickness, is one of the mistakes of the past.

The 2nd article, by Dr. Jackson, offers nothing for special remark, but is, nevertheless, interesting in several particulars, as anomalous statistics, etc., in reference to gynæcology.

The 3rd article, by Lecturer Owens, is of the same general character in reference to surgery. Its feature, however, is the

emphatic confession of Prof. Gross of our total ignorance of the pathogenesis of tumors. Prof. Gross' confession is both timely and truthful; and as it takes "thunder" to wake some of us up, is an important addition to the "capital stock" of us agitators for an "advance" in our conceptions of physiological and pathological processes, and the therapeutics which will naturally follow them. Prof. Gross makes an effective iconoclast. Instead of casting my lot with his "wandering or mobile connective-tissue cells," I prefer to study force, as it is "stored" up in material, as the central feature of all tissue, natural or neoplasms, physiological or pathological.

*Hospital Report*, by Surgeon Lyman. Gynæcological reports are, by some of us, naturally regarded with suspicion. As directing attention almost exclusively to deceptive local appearances, they are mischievous; for many of them disappear spontaneously, while some are probably hastened in their departure by local in connection with general treatment. Like the government published report of "Columbia Hospital," they make good "padding." Dr. Barnes, in his just published work on Women, iterates and re-iterates the fact that structural changes are always found behind changed functions. And "structural changes" are not to be rectified by local applications through speculums alone. The Editor-in-chief (Prof. Allen) has told a good story in reference to an elderly practitioner who called upon him for information in regard to a proper location, as he had been compelled to abandon his life-long field of labor by a new doctor who used a — horn, and had taken all his practice. His advice was significant of his opinion of indiscriminate "speculum practice." Address Prof. Allen for particulars.

*The Clinic*, by Lecturer Bridge, supplies some needed knowledge in regard to the part played by the little trichina insect in changing the structural arrangement of living tissue, demonstrating that changes of function are inseparably associated with changes of structure. The changes effected by the parasite in living tissue, so far as function is concerned, differs in no respect from that by "sclerosis," (so called) except in the possibility of patients pulling out of trichinosis, which never occurs after "sclerosis."

*Society Reports*—That of the Chicago Medical Society has been anticipated, to some extent, by the publication of Dr. Lyman's report on gynæcology.

Prof. Owens' report points out the usual structural changes behind changes of function in his case of "Parietal Gaseous Abscess," which, it seems to me, offered a good opportunity for using the "aspirator."

Dr. Heydock's case of empyema also presented an excellent opportunity for using an "aspirator," besides showing very conclusively that living beings have no greater enemies in nature than



the results of the decay of their own bodies. The "pus" in the pleural cavity was, in its chemical state, a sort of nitro-glycerine; and in its situation material foreign to the body of the patient, storing up "force," which seriously threatened the patient's life several times, necessitating its removal by "paracentesis," when "nutrition," *i. e.*, the normal movement of new material into living tissue, was resumed. But the sequel makes known that structural forms had been lost—a terrible word and fate for a living being, old or young—necessitating the use of the drainage tube permanently.

The proceedings of the Central Illinois Medical Society, interesting as they undoubtedly are, as reported, do not offer anything for remark, except that with a clearer understanding of the real pathology—that is, state of the structures—no medical man will remark that "uræmic poison is not a cause" of puerperal convulsions; for the so-called uræmia is actual demonstration of the changes of structure which have already occurred.

Editors' Book Table notices several new books, and appends a list of pamphlets and journals received.

Editorially, the Philadelphia University of Medicine gets another ventilation. The Chicago Board of Health gets aired in no enviable light; and some space is occupied by considerations growing out of a bill before the State legislature to create an "Asylum for Imbeciles." And the suspicion of the editor that there is a "nigger in the woodpile," is, without doubt, correct. Illinois is not the only State, nor Chicago the only city, which groans under the weight of State and municipal "Boards" for various purposes, but generally operated in the interest of some ring or clique, with an amazing amount of cutlery which needs grinding.

The City Mortuary Report closes the number.

It requires some such an analysis as this to bring out the merits and defects of any particular issue of any periodical. And truth compels the admission that, in the present case, it is no mean showing. It is, in truth, a really good number, not wholly without blemishes in the make up and matter of some of its contents. It affords some evidence, at least, that progress is being made in removing the obstructions which so seriously impede the arrival of the "good time coming," when medicine shall be honored of all men. And to hasten which this review has been written, not in the spirit of fault-finding, but with cordial good will to editors and contributors.

Messrs. W. B. Keen, Cooke & Co., the publishers, present the JOURNAL to its readers in faultless typography, on beautiful paper, the whole mechanical execution being an honor to the publishers' art.

## Progress in Medical Sciences.

ARTICLE I.—*Progress of Surgery.* By JNO. E. OWENS, M.D.,  
Lecturer on Surgery, Rush Medical College, Chicago.

1. *Bloodless Surgery of the Extremities.* By J. E. KELLY, L.R.C.S.D. (The Medical Press and Circular, Dec. 17, 1873.)
2. *On Laryngotomy.* By J. MORGAN, F.R.C.S. Read before the Surgical Society of Ireland, Jan. 16. (The Medical Press and Circular, Feb. 4, 1874.)
3. *Sarcoma Testis;* in which the testicle was retained for many years in the inguinal canal, but eventually descended into the scrotum, and in which, on removal, a portion of the omentum was found adherent to the diseased gland. By HENRY J. TYRRELL, F.R.C.S.D. (The Medical Press and Circular, Feb. 4, 1874.)
4. *A Case of Primary Excision of the Ankle Joint; with Observations.* By HENRY LEE, F.R.S. Transactions of Royal Medical and Chirurgical Society. (Medical Press and Circular, Feb. 11, 1874.)
5. *The Operation for Recto-Vaginal Fistula.* By H. T. WHITTELL, M.D. (London Lancet, Feb., 1874.)
6. *Tumor of Thigh, composed of Muscular Tissue.* Under the care of Mr. JNO. WOOD, King's College Hospital. (London Lancet, Feb., 1874.)
7. *Hereditary Exostoses.* Under the care of Dr. POORE, Charing-Cross Hospital. (London Lancet, Feb., 1874.)
8. *A New Plan in the Treatment of Erectile Tumors by Vaccination.* By Dr. P. BATHEDAT, of Bayonne. (London Lancet, Feb., 1874.)
9. *The Efficiency of Enemata.* (Philadelphia Medical Times, Feb. 7, 1874. Archiv. fur Klinische Chirurgie. Boston Medical and Surgical Journal.)
10. *Extirpation of the Larynx with the Epiglottis.* By Professor BILLROTH. (The Clinic, Feb. 28, 1874. British Medical Journal, Jan. 31, 1874.)

1. Dr. Kelly states that the operations upon which Esmarch's method confers the greatest advantages are those in which much blood is ordinarily lost, or those performed under circumstances which prevent the operator from providing efficient aid. Amongst the former, resections and explorations, either for foreign bodies or where preliminary investigations are judicious, may be specially noticed. These preliminary measures, so conservative in their aim and results, have often been frustrated by the danger or dread of consequent hæmorrhage. Against the obvious advan-

tages of the expedient, we must, in justice, weigh some well-founded objections. In cases where collections of septic matter exist, Esmarch warns us against the danger of favoring by pressure its entrance into the circulation. The absence of bleeding points during the operation may cause us to neglect to secure some vessels which will subsequently be troublesome. As observed in amputations performed in Guy's and other hospitals, the edges of the incisions may slough.

(In a case of re-amputation at St. Luke's Hospital, recently, in which operation Esmarch's method was employed, the edges of the incision sloughed. It is not, however, our opinion that the employment of the above-mentioned method was productive of sloughing in this case. This process (sloughing) was confined to the old cicatrix, which closely resembled cartilage—just such tissue as will almost invariably slough away after re-amputation, which was demanded in consequence of sloughing of flaps after the primary amputation. O.)

I noticed this in my first case only, says Dr. Kelly, and my observations on it and the succeeding cases induce me to regard the sloughing as proportionate to and dependent on the *duration* of the pressure by the elastic bandage, and not to the *bloodless condition* of the tissues. I regard sloughing as unimportant in those cases which are really benefited by the method. In amputations and other operations which can be completed in a few minutes, I cannot recognize the necessity of departing from the old and efficient method of controlling hæmorrhage by direct arterial compression. Where the surgeon must necessarily amputate without sufficient skilled assistance, he is free to select between the immediate danger of hæmorrhage and the remote disadvantage of sloughing of the flaps. The quantity of blood lost during operation is frequently a most desirable antiphlogistic. By Esmarch's method, for good or for evil, this is prevented, and severe inflammation may follow the operation; however, in such cases the surgeon can resort to phlebotomy, or other antiphlogistic treatment. Again, in disease or predisposition to congestion in any of the important viscera, as the lungs or brain, we may well hesitate before we throw the entire amount of blood contained in a limb, either temporarily or permanently, into the general circulation. We must also remember the possibility that this quantity of blood

may embarrass the pulmonary circulation, and aid in developing the fatal effects of the anæsthetic.

2. The paper treats of this operation (laryngotomy) as performed in cases of chronic syphilitic laryngeal disease, where the affection may either directly endanger life by its interference with respiration, or by wearing down the patient by its exhausting irritation.

3. The author states that in this case, which he is about to bring under the notice of the Society (Surgical Society of Ireland), a complication was found which, as far as he had been able to discover, had not before been placed on record. The subject of the communication was a farmer, aged 45 years, the father of five children. He had a large scrotal tumor on the left side, about the size of a small melon, heavy, smooth and elastic; the skin moved freely on it, it had no impulse on coughing, and the cord, though thickened, could be distinctly felt. There was no enlargement of the lumbar glands. It was not translucent. Dr. Tyrrell tapped the tumor with the aspirateur, and drew away half an ounce of arterial blood. A solid enlargement of the testicle was diagnosed, but the true nature of the enlargement was not made out. The patient stated that for many years he had no testicle on the left side in the scrotum, but a soft lump in the groin; that, when he was about twenty years of age, it descended into the scrotum and became painful; but that he was able to press it back again into the groin, where it would remain for a few days and descend again. During the last six years the tumor has grown larger and harder, and during this time he has been unable to press it back into its original position. The case lacks the history of injury or venereal taint.

On the 13th of last September he returned to Dublin, having been in the country, and was admitted into the Mater Misericordiae Hospital. The testicle had increased much in size, and had become very inconvenient from its weight and size. At a consultation, Dr. Tyrrell's colleagues agreed with him that it was a sarcomatous tumor, and should be removed. Two other surgeons of great eminence saw the case, and coincided in opinion with Dr. Tyrrell, but none suspected the complication that was discovered at the operation.

Upon cutting down on the tumor, Dr. Tyrrell found a portion of the omentum in the tunica vaginalis, and intimately attached to the testicle. It was agreed to ligature this portion of the omentum with a carbolized gut ligature, and return the stump and ligature into the abdomen. The cord was tied en masse with a strong hempen thread, and the diseased gland and the portion of omentum attached was removed. No bad symptom appeared, and the wound quite healed twenty-five days after the operation. The tumor proved to be an example of spindle-celled sarcoma.

4. The author describes what he believes to be the only case in which complete primary section of the ankle joint has been performed, and advocates the plan, both in primary and secondary excisions of the joint, of dislocating the tibia and fibula outwards, so as to allow of the articulating surface of the tibia being removed with comparatively little disturbance to the surrounding parts. The articulating surface of the astragalus is also more easily removed in this way than by dislocating the bones of the leg inwards, as has commonly been attempted in secondary excisions. The plan advocated is to remove the internal malleolus first, and then the tibia and fibula may be dislocated outward through the external wound with great facility, and without interfering with any important structures. Such a mode of operating has not, he believes, been hitherto described.

5. Dr. Whittell (Hon. Medical Officer, Adelaide Hospital, South Australia), operated in the usual way, and, having brought the edges together with wire sutures, ordered opium to be given daily, with a view to prevent any action of the bowels. The sutures were removed after the lapse of ten days, when it was found that the operation had failed. Between two and three months subsequently, a second operation was performed, and this also failed. After these disappointments, the author began to question whether the usual plan of locking up the bowels with opium for several days after the operation, was not the real cause of failure. On each occasion the case progressed favorably during the first few days, and it seemed to be probable that the accumulation of fecal matter, and its subsequent passage along the rectum in a hardened condition, tore open the tender structure by which the pared edges of the bowel were united, and thus spoiled the operation. The usual

operation was performed for the third time. On this occasion, however, instead of locking up the bowels, castor oil sufficient to keep the bowels moderately relaxed, was ordered. Two or three fluid motions were passed daily without pain or inconvenience. When the sutures were removed, perfect union had taken place.

6. A butcher, aged 27 years, after hard dancing, suddenly felt something give way at the inner and upper part of the left thigh, and found a small lump had formed there. The accident was accompanied with nausea and subsequent occasional vomiting. When lying down the tumor disappeared, but returned when he assumed the erect position. At one of the London hospitals, two or three days after the patient discovered the tumor, an obturator hernia seems to have been diagnosed. Upon admission (to King's College Hospital), there was a tumor about the size of a hen's egg, at the inner and upper part of the front of the left thigh, one inch and a half below Poupart's ligament, to the inner side of the saphenous opening, which was quite free. The tumor was apparently situated immediately upon the adductor longus muscle. It was elastic and non-fluctuating; there was no impulse on coughing. The skin was freely movable over it, but the tumor could be isolated, or moved independently of the deeper parts. The patient had a constant pain all down the inner side of the same thigh, extending over the left buttock and loin. The tumor was largest when the knee was flexed, and the thigh maintained by the patient in an everted position; but when the thigh was supported, and the patient told to allow the limb to drop, and thus to relax the muscles, the tumor entirely disappeared, but when told to adduct the thigh, the tumor stood out again as before.

Mr. Wood finally made an incision over the tumor, and carefully divided the fascia, and immediately came upon a mass of muscular tissue, of which the tumor was composed, and it was evident that a hernial protrusion of a portion of the muscular belly of the adductor longus had taken place, through weakening of its aponeurosis, and thus given rise to the tumor.

7. A clerk aged 27, was studded with bony tumors, ranging in size from a small marble to an orange. The patient's little daughter, aged four and a half years, was a complete miniature of her father, and presented exostoses in most of the situations where

they were observable in him. Her first exostosis was noticed when she was nine months old. The patient states that his maternal grandfather presented the same phenomena. One of his sisters, aged thirty, has a tumor on the lower end of the femur.

8. Dr. Bathedat, in a letter addressed to the editor of L'Union Medicale, points out what he supposes to be the cause of frequent failures attending the treatment of erectile tumors by vaccinations. The drop of blood that follows the prick of an ordinary lancet, carries away the vaccine lymph, and very few or no pustules are obtained. To remedy this he uses a needle instead of a lancet. The punctures can be multiplied *ad infinitum*, so that a veritable vaccine crust is formed over all the diseased surface, whatever may be its extent. Tumors, he adds, the dimensions of which would not even have allowed a trial of cure with the ordinary lancet, may be treated by this method with a fair chance of success.

9. Gustav Simon has succeeded in demonstrating that a stream of water forced into the rectum by means of a syringe, may be made to penetrate the entire length of the large intestine, and possibly extend also into the small intestine. His experiments were performed upon two separate patients, each of whom happened to have a fistulous opening in the ascending colon, near its junction with the cæcum.

10. Professor Billroth has performed the operation of removing the larynx and epiglottis. The patient was a strong man about forty years of age, the subject of cancerous growths in the larynx, which had repeatedly, after putting him in danger of death from suffocation, been removed by Dr. Storck, with the aid of the laryngoscope. Prof. Billroth's operation was performed on the last day of 1873. In the beginning of November, the new growths extended so far into the interior of the larynx, that their removal from above was no longer possible. As a part of the right vocal cord was present, Drs. Storck and Billroth hoped to preserve this, however imperfect; they therefore opened the larynx from the front, and, after removing the growths, applied solution of perchloride of iron to the inner surface. The result of this operation appeared at first to be very promising, but in the middle of December new growths were detected, and at the end of the month



symptoms of asphyxia. Drs. Billroth and Storck decided that the whole larynx was so full of malignant growths that it would be useless to repeat the operation of dividing it and cleaning them out, and there was no longer a possibility of preserving any part of the vocal cord. Extirpation of the part would produce no additional physiological defect, and might lead to a radical cure if the disease was confined to the part, and had not reached the glands. Professor Billroth therefore removed the entire larynx. The patient bore the operation very well; he breathed freely through the trachea, in which a tube was inserted; the fever was slight, and of short duration; and on January 9th the wound was healing favorably. On the 24th the man was reported to be able to eat and drink, and to sit up for several hours daily.

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ARTICLE II.—*Progress of Syphilology*. By JAMES NEVINS HYDE, M.D., Lecturer on Dermatology and Syphilis, Rush Medical College, Chicago.

1. *On Syphilitic Membranoid Occlusion of the Rima Glottidis*. LOUIS ELSBERG, M.D. (American Journal of Syphil. and Dermatol.)

2. *Syphilitic Ulcerations of the Cervix Uteri*. Appendix to a translation into French of Churchill's Diseases of Women. A. LE BLOND. (Le Progres Medical, Oct. 11, 1873.)

3. *On the Treatment of Syphilis*. Prof. ZEISSL. (Wien. Med. Wochenschr.)

4. *On the Treatment of Syphilis*. A. LANCEREAUX. (La France Medic., Nov., 1873.)

5. *The Oleates of Mercury*. JOHN MARSHALL. (Medical Record, Jan. 15, 1874.)

6. *On the Question of the Transmission of Syphilitic Contagion in the Rite of Circumcision*. R. W. TAYLOR, M.D. (Reprinted from the N. Y. Medical Journal, Dec., 1873.)

1. Syphilitic membranoid occlusion of the rima glottidis requires, for its accurate determination, the use of the laryngoscope. Prof. Elsberg reports six cases treated by himself, three by Turck, one by M. Mackenzie of London, and one by Navratil of Pesth. About two and one-quarter per cent. of cases of laryngeal syphilis, are said to be complicated by occlusion.

Occurring, necessarily, in only comparatively late stages of the disease, it may be considered as a result and termination of the syphilitic process; and might be classed with tertiary syphilitic affections, were it not coincident with ulceration of the mucous surfaces, rather than of the deeper structures. In two of the eleven cases, the cartilaginous free portion of the epiglottis was reduced to a stump;\* in two, its upper edge was eaten away; while in six, the cartilage was unimpaired. In no case were other cartilages involved; in two, however, the nose had fallen in.

As to the interval existing between the date of infection and the formation of the web, no satisfactory evidence was supplied by these cases. In one individual, hoarseness had existed prior to the constitutional disorder; but in none of the others was there room for suspicion of any other agent in the production of the laryngeal disease. The ages of these patients ranged from sixteen to forty-eight years; nine, however, were between twenty and thirty-three years old at the time of treatment. Nine were males, and two females, "a disproportion which we might jocularly ascribe to the proverbial constant use of the vocal bands in the latter."

The webs generally were formed of cicatricial tissue, resulting from syphilitic ulceration, and always began at the anterior angle, the greater or smaller orifice left for breathing space having been usually at the posterior extremity of the rima. In two cases, the membrane occluded the whole rima; in one, it was attached both anteriorly and posteriorly with a central orifice; in the other, it was unattached posteriorly. In still another, the membrane was adherent both in front and at the inter-arytenoid fold, but the main portion of the left vocal band was unattached, so that along its free edge there was a narrow breathing chink.

Non-membranoid laryngeal occlusion, is situated generally above the rima glottidis, and results from infiltration or swelling of the ary-epiglottic folds, laryngeal walls or ventricular spaces; cica-

\* A patient with complete destruction of the epiglottis, from syphilitic ulceration, was recently exhibited to the Chicago Society of Physicians and Surgeons, by Dr. Owens, of this city. No stump, no relic of the fibro-cartilage remained. The hoarseness almost amounted to aphonia. The vocal band on one side was free, but covered by a reddened and injected membrane—that of the other, appeared to have been in part destroyed. Deglutition was almost unimpaired in a semi-recumbent position; and in no other. The case illustrated in a remarkable manner the adaptability of the neighboring organs.

tricial deformity, destruction or displacement; and neoplasms. Non-syphilitic occlusion of the rima by a membrane, may be congenital or traumatic. (Suicidal throat-cutting and surgical thyrotomy.) The nature of the obstruction, if syphilitic, is most readily determined, when there are characteristic ulcers in the neighborhood, or in the pharynx, nasal passages and skin; and when other morbid processes can be excluded.

The course of the formation of the membrane is more or less chronic, and the dyspnœa with hoarseness or aphonia, is developed so slowly that an adaptation of the organs occurs, and the symptom last described may become aggravated to a fearful degree, before becoming fatal; as in the first of these cases. Any partial occlusion is, however, highly dangerous, since it is liable to complication with superadded œdema.

General and local treatment is requisite—the former, including hygienic measures, should consist of tonics, suppletories, medications directed to the skin, bowels and kidneys, and iodides, if mercurialization has occurred; otherwise, the two great antisyphilitic remedies should be combined, or the mercurial administered, in accordance with Lewin's method, by the skin. For local treatment, we must be ready in every case of extreme dyspnœa, to perform tracheotomy; "*this may be needed before we can attempt to remove the web.*"

The membrane is to be removed by galvano-cautery and through the mouth. Mackenzie split the larynx open from without, in order to divide the web, and it partially re-formed. Turck operated locally in only one case, and split the web with the laryngeal knife, introduced through the mouth. Its anterior portion subsequently reunited. Navratil performed a similar operation, with like results.

Prof. Elsberg's first and second cases were not operated upon. In the third, an attempt at treatment by the galvano-cautery, failed for want of proper apparatus; the membrane was partially divided anteriorly, but subsequently reunited.

In the remaining cases, the web was successfully removed by the galvano-cautery. The instruments employed were Voltolini's (Middeldorpf's) carbon-zinc battery of two elements; his dull, knife-shaped, galvano-cautero, made in Breslau; as well as Schnitzler's, made in Vienna; and Von Brun's, made in Tubingen. The

rods were surrounded with silk thread, and dipped into cold water before introduction, to prevent the conduction of heat toward their handles.

Usually a number of galvano-cauteric applications were needed, and repeated from time to time. In the fourth case, the web was entirely removed at one sitting. Little after treatment was found to be requisite beside, vocal gymnastics, the inhalation of astringent or soothing sprays, and dilatation by bougies, till the danger of reproduction of the membrane had passed.

2. Upon the cervix uteri the soft variety of chancre is oftenest found. Indurations, of rare occurrence, have however been established in cases of pescidentia. Adherent ulcers, with grayish floors, irregular borders and clean-cut edges, surrounded by a somewhat inflamed areola, are, in this location, as a rule succeeded by general infection. They may become multiple, coalescent or phagedenic. Diphtheritic and ulcerative forms are described; the latter invading the adjacent submucous tissues, and occasioning, in many cases, great loss of substance. These lesions are not generally found upon the cervical apex, as are simple ulcers, but at the point of union of the cervix and vagina. Those which are located in the cervical canal, require dilatation of the os tincae, prior to discovery and treatment. After a variable period, their characteristic features are lost, and chancres may thus come to resemble simple ulcers, mucous condylomata, or vegetations resting upon a somewhat indurated base; the latter needing to be distinguished from cancerous degenerations. The history of such cases furnishes a clue to the diagnosis. When the surface of a simple ulcer becomes inoculated with a specific virus, it changes and becomes grayish, soft and fungous; the distinguishing features of the resulting chancre being simultaneously modified.

Mucous patches, located upon the os and cervix, are elevated and pearly-white.<sup>b</sup> Their contagiousness is now generally admitted. After persistence for a longer or shorter interval, they return to the type of a simple ulcer.

3. Professor Zeissl considers that "the preparations of iodine, judiciously administered, with an appropriate regimen, are able to cause the disappearance of the first manifestations of syphilis, or,

at least, to so modify the disease, that it yields to a small number of mercurial inunctions, without subsequent relapses, that is, so that the syphilis may be regarded as definitely cured."\* The early syphilides, however, yielded more rapidly to a mercurial course; the later, disappearing quickly under the use of iodine. Mucous syphilides succumbed much earlier to the iodine treatment. The tincture of iodine is preferable to the iodide of potassium, not only because of its cheapness, but also on account of its inaptness for the production of the phenomena known in "iodism." Half a fluid drachm is added to six fluid ounces of water, and a table-spoonful given twice daily.

Syphilis is found to be rebellious in pregnant women infected at the time of conception, little disposed to be amenable to treatment until after confinement, and then requiring such treatment for a subsequent period.

Prof. Zeissl uses iodoform locally in indolent ulcers, and exhibits it internally in two and three grain doses, for syphilitic neuralgia—the remedy being administered in pilular form, with a bitter extract. In the event of gangrene resulting from syphilitic adenopathy, he employs the continuous water bath.

4. Lancereaux employs mercury in primary syphilis, only when there is protracted induration of the primary lesions, with well-marked adenopathy, nor does he advise cauterization; this is useless if not dangerous. When there are prodromata of an explosion of syphilis, (intense cephalalgia, great lassitude, wandering pains and moral depression)† mercury is still withheld, and,

\* In an article which appeared in the July number of the *Chicago Medical Journal* for 1872, ("On Syphilitic Lesions of the Viscera,") I stated that "if it were not foreign to the subject-matter of these pages, I should proceed to show that, contrary to the advice of many syphilographers, this treatment (that by iodine compounds) can be applied to cases of primary and secondary syphilis with singular success"; and that it will "most surely and speedily procure a relief from symptoms; when the mercurial is indispensable in order to make that relief permanent." These opinions, fortified by the authority of the distinguished advocate of the doctrines of the dualistic school, cannot fail to receive the attention which they deserve.

† I have now under my care a patient who exhibited these prodromic symptoms in a marked degree, when literally on the eve of an eruption of papulosquamous syphilides. The precedent sore had been long and extensively irritated and indurated by the caustic applications of an attending physician. Las-

especially in chloro-anæmic cases, chalybeates substituted; laxatives, if indicated by aepsia.

When the exanthemata appear, mercury is exhibited, and discontinued immediately upon their disappearance. The objections of M. Diday to such a course, in case of roseolar and papular syphilides, are not held to be valid. The administration of the metal by the mouth is preferred to the method by inunction, or Lewin's method by hypodermic injection. Where there are febrile complications, and occasionally at the outset of the disease, iodine is employed.

In tertiary syphilis, Lancereaux uses the iodide of potassium; in cases where there is visceral complication, small doses of calomel; in others, where there is room for suspicion of some lesion of the hæmatopoietic glands, nitric acid and mercurial inunction. Foul tertiary ulcers are dressed with glycerine, alcohol, iodine, copper, mercury, iron, iodoform, hydro-chloral and meta-chloral, (Duj. Beaumetz) and nitric acid. Arthropathy, osteocopic pain, periostitis and exostoses, require vesication; the blisters being dressed with emollient cataplasms or stimulating ointments, as circumstances may indicate.

5. The oleates are clean, economical and superior to other mercurial ointments in power of penetration and diffusibility. They are absorbed by the skin with remarkable facility, and display their remedial effects with great promptitude. They are not to be rubbed in, but applied with finger or brush, lightly, in order to preclude the possibility of unnecessary irritation. In the event, however, of such an occurrence, olive oil or purified lard may be added. One grain of morphia is advantageously combined with each drachm of the oleate of mercury; the pure alkaloid is, however, to be used, since the salts of the hydro-chlorate, the acetate and the meconate are insoluble in oleic acid. From ten to thirty drops may be applied morning and night for four or five days; then at night only for an equal period, and subsequently on alternate days until a cure is effected. Salivation and constitutional irritation are not produced. Persistent and chronic inflammations, situate had existed for several days to such an extent that he reclined constantly upon a lounge—night-sweats debilitated him when asleep—gloomy forebodings added to the distress occasioned by rheumatoid pains in almost every joint. On the appearance of the eruption, these phenomena at once disappeared.

with lesions of adjacent integument, are particularly benefited by such a course.

"The oleate is to be prepared with the oxyd, precipitated by caustic potash or soda, from a solution of the metal in nitric acid, recently made and well dried. The solution of mercury by oleic acid is assisted by a temperature of three hundred degrees Fahrenheit." The five per cent. solution is a perfectly clear, pale yellow liquid, resembling, but thinner than, olive oil; the ten per cent. solution is also fluid and perfectly clear, but as dark as linseed oil; while the twenty per cent. solution is an opaque, yellowish, unctuous substance, closely resembling in appearance resin ointment. It melts very readily at the temperature of the body, and forms a kind of transparent, viscid varnish, when applied to the skin. Excessive haste and too great an elevation of temperature may reduce the metal in course of its preparation.

In cutaneous diseases the five per cent. solution without morphia is recommended, especially in tinea sycosis. In congenital syphilis a piece of the twenty per cent. solution as large as a pea or bean may be applied to the axilla night and morning for five or six days, and will produce constitutional effects without the annoyance of uncleanness. As a topical remedy for the non-ulcerating syphilides of the head, face and neck, the ten per cent. solution is valuable as an accessory to other treatment.

6. Dr. Taylor's monograph is the result of an investigation conducted by himself at the request of the Board of Health of the city of New York, that body having had its attention directed to four cases in which it was suspected that syphilis had been communicated in the performance of circumcision.

In the first child, he discovered unmistakable lesions of syphilis upon the genital organs, and well marked, but small, papular syphilides over the trunk, arms and thighs. In the second child, the circumstances of the development of the initial lesion left room for doubt as to whether the contagion occurred in the religious rite, but did not preclude such a possibility. In the other three cases, the facts elicited, as well as analogical evidence, pointed to a local rather than to a systemic condition as the origin of the lesions of the genitals.

These children had all been circumcised by one Hebrew operator, whom Dr. Taylor had the opportunity of examining.



This man suffered from a copious eruption of *tinea versicolor* upon the upper portion of his trunk, and displayed a few acne-papules upon the back, but had no syphilitic history, nor had he any evidences of syphilitic disease.

Dr. Taylor concludes that (*a*) there is a possibility of the occurrence of syphilis in the Jewish rite of circumcision; (*b*) that the contagion is most likely to be communicated in the act of sucking the wound, the mouth containing a styptic liquid, or by the use of instruments soiled by syphilitic blood; (*c*) that the chances of such contagion are rendered greater by the employment of irresponsible, non-professional operators; (*d*) that the operation of sucking should be wholly abolished, and styptic solutions, if employed, should be poured upon the wound, and not squirted by the mouth; (*e*) that successive operations should not be performed without thorough and careful cleansing of all instruments; and (*f*) that physicians, or officiating rabbis, should alone be empowered to perform a rite, which, he justly adds, "has useful sanitary bearings."

The facts elicited in this investigation, induced the writer to inquire concerning the method observed by the Hebrews of Chicago, in the observation of this rite, and he was put into communication with a Jewish operator, who has for thirteen years enjoyed the almost exclusive privilege of circumcising the infants of his nationality, in this vicinity, and in several adjoining States. Strange as it may appear, his services have been in such demand that this occupation has engrossed his entire time.

It is reasonable to suppose that, with the precautions observed by him, no contagion can occur during the performance of the rite, and, in justice to him it should be added that, according to his statement, none such have occurred. The operation is very rapidly performed after drawing the prepuce through a narrow slit in a silver shield, and the styptic solution employed—alum water—is poured over the wound and never ejected from the mouth. He admits that on several occasions he has sucked the blood from the parts after the operation, when assured that there was no taint of the system, but professes to have abandoned the practice in later years. The apparatus employed is kept scrupulously clean.

**Editors' Book Table.**

NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.

*Physicians' Pocket Case-Record, and Prescription Blank Book.* Cincinnati Case-Record Company. 1874.

Is a form for the writing and registration of prescriptions, and the recording of clinical memoranda. The Office Case-Record, etc., being a quarto edition of the same, both arranged somewhat after the manner of a check book, the leaf being of sufficient length to contain the prescription and a duplicate or abstract thereof upon the stub, after the prescription shall have been torn off; on the reverse side of the stub is a blank for recording the patient's name, address, diagnosis, age, build, pulse, tongue, urine, stools, heat, etc. All this is very useful, but involves an amount of clerical labor which few physicians are willing to perform. It will doubtless find its admirers who will use it, for awhile, and when the novelty wears off will abandon it.

One feature of the system we must condemn; it is copyrighted. We contend that every member of the medical profession is bound in honor to contribute everything in his power to the advancement of his profession, and has no right to trade upon the necessities of his professional brethren for his own exclusive benefit. We have no intention to impugn the motives of the author of this work, who has doubtless acted in good faith according to his view of the matter. Fancy Laennec patenting his stethoscope, or Hodge his forceps! If we have anything to offer to our profession which may accrue to its advantage, let us give it freely, and trust to our reward in our participation in the general advancement. H.

*Clinical Researches in Electro-Surgery.* By A. D. ROCKWELL, A.M., M.D., and GEO. M. BEARD, A.M., M.D. New York: William Wood & Company. 1873.

A really valuable contribution to the resources of clinical surgery; being an apparently honest report of experiments for the removal, by both the electrolytic and galvano-caustic methods, of erectile and vascular, cystic and fibrous, epithelial and scirrhus growths, showing the actual and relative advantages of the two methods. The results of these experiments have been highly satisfactory to the authors, and seem to have demonstrated to them the exemption of these methods from some of the objections usually urged against them, among which may be mentioned pain, which seems by no means a necessary accompaniment of the application of these methods of treatment.

The second chapter comprises the results of experiments made for the relief of various forms of skin disease, in which both local and central galvanization has been applied. The results in this department of clinical research have been quite as satisfactory as in the last one, and, moreover, seem to rest upon more certain physiological data. Eczema, prurigo, acne, pityriasis, psoriasis, and even elephantiasis, have been made the subjects of experiments, and in all cases the results have justified the belief that, to say the least, a very valuable addition has been made to the armamentum chirurgicum in the galvanic battery, and a very important contribution to our knowledge of its application by this treatise of Drs. Rockwell and Beard, which will amply compensate any one who may desire information upon these subjects, for the money and time spent in its purchase and perusal. H.

*Lectures on the Clinical Uses of Electricity.* Delivered in the University College Hospital. By J. RUSSELL REYNOLDS, M.D., F.R.S., Fellow of the Royal College of Physicians, etc., etc. Second edition. Philadelphia: Lindsay & Blakiston. 1874.

The study of, and the general interest awakened in, the therapeutic relations of the various forms of electricity, seem destined to initiate a new era in the history of practical medicine.

Anything emanating from the pen of J. Russell Reynolds, to whom the students of medicine are already so much indebted, is entitled to thoughtful study, and the little volume before us is not an exception to this general commendation. The lectures, five in number, with an appendix, have already been published in the *London Lancet*.

The author is one of the very few who can speak with authority, and yet not dogmatically. This is well illustrated in the first division, in which the diagnostic and the therapeutical capacities of electricity are analyzed and limited; and in the second, in which the various forms of this force are defined and their applicability explained. The tyro in electro-therapeutics will find this little book one of the clearest, most explicit and intelligible guides to a correct understanding of the real value of this most important agent; and the adept will derive that pleasure from its perusal which an expert always finds in the work of a master hand. H.

*The Student's Guide to Surgical Anatomy.* Being a description of the most important surgical regions of the human body, and intended as an introduction to operative surgery. By EDWARD BELLAMY, F.R.C.S., Associate of King's College, London, etc. With illustrations. Philadelphia: Henry C. Lea. 1874.

The author, in his preface, comments very justly upon the paucity, in English medical literature, of works similar to his own, and assumes with equal justice that his little book will serve to supply

a need which all students must have appreciated. He has done his work well, for it is rare to find so much practical knowledge condensed into the small compass of six chapters. The plan of the work is simple, the style concise, and the matter practically important. The illustrations, about fifty in number, are for the most part taken from reliable sources, about one-third being original. Taken altogether, this is one of the most useful little books accessible to English-speaking students, and there are few whose studies of surgical anatomy will not be materially facilitated by it.

H.

*The Physician's Dose and Symptom Book*; containing the doses and uses of all the principal articles of the *Materia Medica*, and officinal preparations, etc., etc. By JOSEPH H. WYTHES, A.M., M.D., etc. Eleventh edition, revised. Philadelphia: Lindsay & Blakiston. 1874.

What we have said on a preceding page of another little book, whose author's name bears a striking resemblance to that of the compiler of the little work before us, will apply with equal force to this.

We have no fault to find with the good intentions of the author, which he says, in his preface, were "to save trouble," and that his intentions have been abundantly appreciated by large numbers of physicians willing to "save trouble," is demonstrated by the fact that ten editions of the work have been already exhausted. We cannot avoid expressing the belief that the general use of such books tends to encourage superficiality, already the greatest defect in medical education, and to lower the standard of professional attainment, already far too low. The excuse for the publication of these "ready reckoners," and short cuts to knowledge, time-honored since the days of Neill & Smith's *Compendium* and Mendenhall's *Vade Mecum*, both long since, happily, consigned to oblivion, *i. e.*, to save trouble of reference by the busy practitioner, is a fallacy, as the busy practitioner carries, or should carry, the contents of such a book in his own memory, compiled from the records of his daily experience. In fact, they are not found in such hands, but in those of medical students trying to supplement the idleness and negligence which marked their "first course" by "cramming" for examination; or in after life, "posting up" in an emergency.

The matter of the book is scarcely up to the times. *Ex. gr.*: to an inquirer anxious to "post up" on bromide of potassium, the information, "Use as iodide of potassium, but slower in effect," will be of questionable value. The dose of tincture of aconite (leaves or root?) prescribed, *i. e.*, "10 to 40 drops, gradually increased," would not only speedily cure a case of "neuralgia or rheumatism," but effectually prevent its return, in the same patient

and probably in the physician. The practitioner who prescribes  $\frac{1}{16}$  to  $\frac{1}{12}$  gr. of strychnia, as here directed, should study well the phenomena of tetanus, to guard against surprises. Nor do we think that the alterative effects of prot-iodid of mercury will be best demonstrated by doses of ij. grs.

*Lectures on Bright's Disease, with especial reference to Pathology, Diagnosis and Treatment.* By GEO. JOHNSON, M.D., F.R.S., Fellow of the Royal College of Physicians; Honorary Fellow of King's College, London; Professor of Medicine in King's College, and Physician to King's College Hospital. New York: G. P. Putnam's Sons. 1874.

Twenty-eight years have elapsed since the publication of his papers in the Medico-Chirurgical Transactions identified the name of George Johnson with the study of renal pathology, and his Gulstonian Lectures in 1852, and the publication of his treatise on Diseases of the Kidney, in the same year, marked him as one of the greater teachers in this department of medicine, and enrolled his name with those of Bright, Garrod, Golding, Bird, Bence, Jones, Todd, and Rayer. This last contribution to the literature of renal disease in no way detracts from the author's high reputation. The work before us consists of seven lectures, arranged in as many chapters, of which the first comprises the minute anatomy and physiology of the kidney and the general pathology of Bright's disease, the latter of which the author formulates into five propositions, viz.:

I. Bright's disease is not merely a local malady, but a disease of constitutional origin; and the proximate cause of the renal disease is, in all probability, a morbid condition of the blood.  
\* \* \*

II. The morbid blood, which is assumed to be the proximate cause of Bright's disease in all its forms, exerts its influence primarily upon the gland-cells which line the convoluted tubes. \* \* \*

III. The structural changes which occur in the basement-membrane and in the malpighian capsules are direct results of intra-tubular cell-changes.

IV. During the progress of chronic Bright's disease, the blood-vessels in the kidney and in many tissues and organs undergo very interesting changes, but these occur later and less constantly than those which affect the secreting tissues of the gland.

V. The pathological products of the structural changes within the tubes, being carried out by the liquid secretion, escape with the urine and appear in the form of cylindrical casts of the uriniferous tubes; and a microscopical examination of these tube-casts affords most interesting and valuable information as to the nature and the stage of the renal disease.

The second chapter treats of acute Bright's disease under its

various synonyms, acute desquamative nephritis, acute albuminuria, and acute renal dropsy; the form of this disease frequently occurring as one of the sequelæ of scarlet fever being assumed as the type; acute Bright's disease, however, may occur without desquamation, without albuminuria, and permits, generally, a favorable prognosis.

The third, fourth and fifth chapters constitute a complete treatise upon chronic Bright's disease under its different forms, marked by the small, contracted and granular, and the large white or fatty, and the lardaceous or waxy kidney, together with the organic complications arising in its course.

In this, the chronic, form of the disease, the author gives us little to hope for in the way of favorable prognosis, regarding every variety of it as essentially fatal.

The sixth lecture, upon the subject of albuminuria unassociated with Bright's disease, possesses much interest, inasmuch as the difficulties perceived by some in distinguishing these morbid phenomena may therein be entirely cleared away. The section relating to puerperal albuminuria will be found especially clear and concise.

The treatment of both forms of the disease is detailed in the seventh and last chapter, and is an admirable illustration of physiological therapeutics, quite refreshing in this age of empiricism.

BOOKS RECEIVED.

*The Marine Hospital Service of the United States from 1798 to 1871; being the Annual Report of the Supervising Surgeon for the fiscal year 1873.* By JNO. M. WOODWORTH, M.D.

*Treatment of Nervous and Rheumatic Affections by Static Electricity.* By Dr. A. ARTHIUS. Translated from the French by I. H. Etheridge, M.D., Professor of General Therapeutics, Rush Medical College, Chicago. W. B. Keen, Cooke & Co. 1874.

*Remarks on the Management of Intermaxillary Bone in Double Hair Lip.* By W. R. WHITEHEAD, M.D., of Denver, Colorado. Denver, 1873.

PAMPHLETS RECEIVED.

*Report of the Autopsy of the Siamese Twins, together with other interesting information concerning their life, reprinted from the Philadelphia Medical Times.* Philadelphia: J. B. Lippincott & Co. 1874.

*Epidemic Diseases as dependent upon Meteorological Influences.* By C. SPINZIG, M.D. St. Louis, Mo., 1874.

*Report of the Vaccine Department of the New York Dispensary for the year 1873.* By Dr. FRANK P. FOSTER, Director of the Vaccine Department. New York, 1874.

*Twenty-fifth Annual Report of the Indiana Hospital for the Insane, for the year ending October 31, 1873, to the Governor.* Indianapolis, 1874.

*Contributions to the Study of Yellow Fever.* By J. M. TONER, M.D., and JNO. M. WOODWORTH, M.D. Washington, 1874.



*Constitution and By-Laws* of the Association of the Alumni of the Albany Medical College. Albany, 1874.

*Constitution and By-Laws* of the Medical Society of Central Missouri. Jefferson City, Mo., 1874.

*Cerebro-Spinal Meningitis in Massachusetts in 1873*, with some Inquiry into the Circumstances Attending its Origin and Supposed Cause. By J. BAXTER UPHAM, M.D. Boston, 1874.

*Writers' Cramp or Scriveners' Palsy*. By REUBEN A. VANCE, M.D., New York.

*Skin Grafting*. By J. R. LEWIS, M.D., Surgeon to the Pennsylvania Hospital, and to Will's Ophthalmic Hospital.

## JOURNALS RECEIVED.

L'Anatomie et de la Physiologie, Journal de. CHARLES ROBIN. Paris.—No. 1, Janvier et Fevrier; No. 2, Mars et Avril, 1874.

Archives of Ophthalmology and Otology. Knapp & Roos. New York and Heidelberg. Vol. III, No. 2.

American Practitioner, Louisville, Ky.—April, 1874.

American Journal of Syphilography and Dermatology—April, 1874.

Atlanta Medical and Surgical Journal—April.

The Boston Medical and Surgical Journal—April, 1874.

" British Journal of Dental Science—Feb. and March, 1874.

" Buffalo Medical and Surgical Journal—Feb., March and April.

" Boston Journal of Chemistry—April.

" Canada Medical and Surgical Journal—March and April.

" Clinic, Cincinnati—March 21, 28, April 4, 11.

" Cincinnati Lancet and Observer—April.

" Dental Cosmos—April, 1874.

" Eclectic Medical Journal, Cincinnati—April, 1874.

" Indiana Journal of Medicine—March and April, 1874.

" Kansas City Medical Journal—March and April, 1874.

" London Lancet—March, 1874.

" Medical Examiner, Chicago—March 15, April 1.

" Medical and Surgical Reporter, Philadelphia—March 21, 28, April 4.

" Medical Times, Philadelphia—March 21, 28, April 4.

" Medical Times and Gazette, London—March 7, 1874.

" Missouri Clinical Record, Vol. 1, No. 1, St. Louis, Mo.—April, 1874.

" Medical Record, New York—April, 1874.

" Medical Press and Circular, London—March 18, 1874.

" Medical News and Library—April, 1874.

" Medical Herald, Leavenworth, Kansas—April, 1874.

" Medical Union—New York, April, 1874.

" New York Medical Journal—April, 1874.

" North-Western Medical and Surgical Journal—April, 1874.

" Nashville Journal of Medicine and Surgery, March, 1874.

" Ohio Medical and Surgical Reporter—January and March.

" Pacific Medical and Surgical Journal, San Francisco—March and April.

" Physician and Pharmacist, New York—March, 1874.

" Progres Medicate, Nos. 6, 7, 8, 9, 10, Paris, 1874.

" Pharmacist, Chicago—April, 1874.

" Practitioner, London—March, 1874.

" Richmond and Louisville Medical Journal—March and April, 1874.

" St. Louis Medical and Surgical Journal—April, 1874.

" Southern Medical Record, Atlanta—March, 1874.



Editorial.

"Oh wad some power the giftie gie us, to see oursels as ithers see us." So sang auld Scotia's bard, and we have often mentally re-echoed the prayer, which has most unexpectedly been answered by our "Country Correspondent" in his "Review of the CHICAGO MEDICAL JOURNAL, April No." Long familiarity with the style of our "Correspondent" has convinced us of his entire exemption from the vice of flattery, and therefore we accept his commendations and condemnations with all due humility, hoping at some future day to merit the one and to escape the other entirely. Being human, we do not claim perfection, only aspiring thereto. May its partial attainment, with a little assistance from our "Correspondent," be not unattainable! H.

**American Medical Association.**

PHILADELPHIA, 1400 PINE STREET, S. W. CORNER BROAD.

The Twenty-fifth Annual Session will be held in the city of Detroit, Mich., on Tuesday, June 2nd, 1874, at 11 A. M.

"The Chairmen of the several sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. \* \* \* \*"—BY-LAWS, Art II, Sec. 4.

SECTIONS.

Practice of Medicine, Materia Medica and Physiology.—Dr. N. S. Davis, Chicago, Illinois, Chairman. Dr. Geo. E. Frothingham, Ann Arbor, Mich., Secretary.

Obstetrics and Diseases of Women and Children.—Dr. Theophilus Parvin, Indianapolis, Ind., Chairman. Dr. Montrose A. Pallen, St. Louis, Mo., Secretary.

Surgery and Anatomy.—Dr. Samuel D. Gross, Philadelphia, Pa., Chairman. Dr. Alonzo Garcelon, Lewiston, Me., Secretary.

Medical Jurisprudence, Chemistry and Psychology.—Dr. A. N. Talley, Columbia, S. C., Chairman. Dr. E. Lloyd Howard, Baltimore, Md., Secretary.

State Medicine and Public Hygiene.—Dr. A. Nelson Bell, Brooklyn, N. Y., Chairman. Dr. A. B. Stuart, Winona, Secretary.

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and give due notice of the same. \* \* \* \*"—BY-LAWS, Art. II, Sec. 5.

The following Committees are expected to report :

On Cultivation of the Cinchona Tree.—Dr. L. J. Deal, Pennsylvania, Chairman.

On the Treatment of Fractures.—Dr. Lewis A. Sayre, New York, Chairman.

On Gynæcology.—Dr. M. A. Pallen, Missouri, Chairman.

On some Diseases Peculiar to Colorado.—Dr. John Elsner, Colorado, Chairman.

On Rank of Medical Corps of the Army.—Dr. J. M. Keller, Kentucky, Chairman.

On Prize Essays.—Dr. G. K. Johnson, Michigan, Chairman.

On the Progress of Otology.—Dr. D. B. St. John Roosa, New York, Chairman.

On American as compared with Foreign Winter Cures.—Dr. H. R. Storer, Massachusetts, Chairman.

On Railroad Injuries.—Dr. W. F. Peck, Iowa, Chairman.

On the Therapeutics of Ammonia.—Dr. P. J. Farnsworth, Iowa, Chairman.

On the Relation of Physiology to the Practice of Medicine.—Dr. E. W. Gray, Chairman.

On Puerperal Fever.—Dr. W. O. Smith, Kentucky, Chairman.

On the Legal Relations of Moral Insanity.—Dr. E. Lloyd Howard, Maryland, Chairman.

The following amendments to the Plan of Organization are to be acted upon :

By Dr. N. S. Davis, Illinois—

Strike out the second paragraph of Art. II, and insert the following :

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

Also, strike out the fourth paragraph of same Article, and insert :

"Each State, County and District Medical Society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number."

"The Medical Staffs of the Army and Navy shall be entitled to four delegates each."

By Dr. P. Pineo, of Massachusetts—

Art. II, second paragraph, after "Army and Navy," insert "and the Marine Hospital Service of the United States."

By-Laws, Sec. 6, after "the chiefs of the bureaus of the Army and Navy," insert "and the supervising surgeon of the United States Marine Hospital Service."

By Dr. E. L. Howard, Maryland—

Art. IV. Strike out second clause of first paragraph, and insert :

"They shall be nominated by the Judicial Council, and shall be elected by vote on a general ticket."

By Dr. A. S. Maxwell, of Iowa—

"Resolved, That in view of the many and important duties imposed upon the Nominating Committee, the Medical Society of each State and Territory that elects delegates, be requested, when selecting delegates, to nominate one member of such delegation as their member of the nominating committee, and also designate the mode of filling vacancies."

By Dr. A. M. Pollock, of Pennsylvania—

Art. VI., first paragraph, strike out the word "five" and insert "ten."

By-Laws, Art. 5, first paragraph, strike out "five" and insert "ten."

Secretaries of all medical organizations that have adopted the Code of Ethics, are respectfully requested to forward to the undersigned a complete list of their officers, with their post office addresses, and the number of their members in good standing. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

It will also enable the Permanent Secretary to present a correct report of the Medical organizations in fellowship with the Association.

WM. B. ATKINSON, M.D., Permanent Secretary.

***Rush Medical College—Names of Graduates, 1873-4.***

NOTE.—The subjoined List of Graduates should have been published in the March No. of the JOURNAL, but the manuscript having been lost, it was unavoidably omitted until a correct copy could be obtained. The Editors trust that this accident will be deemed a sufficient apology to the Class for the apparent neglect.

William Andrew Allen.  
Sanford Fillmore Bennett.  
Victor Arthur Bertram.  
Charles LeRoy Burroughs.  
John Henry Byrne.  
Oscar Nathan Carr.  
Theodore Jefferson Catlin.  
George Henry Chapman.  
Frank Wilbur Chase.  
Ira Broadwell Connett.  
James Wells Cook.  
James Edwin Cowan.  
Henry Crowder.  
Frederich Wilhelm Denke.  
Robert Ford Dundass.  
Leonidas Hamlin Eaton.  
David William Edgar.  
Andrew Judson Ervey.  
William Henry Franks.  
William Harrison French.  
Ira Hamilton Gillum.  
Ezra T. Goble.  
Zenas Harmon Going.  
George Washington Greaves.  
William Samuel Grimes.  
John Edgar Hathorn.  
Truman Augustus Herrington.  
Wilbur Alson Hendryx.  
Gershom Hyde Hill.  
Lewis Cass Hormell.  
John Wesley Lane.  
Abraham Leigh.  
William Russel Lewis.  
Robert A. Livingston.  
Frank Howard Lord.  
Henry Smith Lytle.  
Herbert Marcus McKenzie.

Robert Edward McClelland.  
Addison Webster McCoy.  
James Harold McCune.  
James Gallagher McElroy.  
Oliver Harrison Martin.  
Samuel Warren Mercer.  
George Henry Miller.  
Frank Lawrence Miles.  
Theophilus Wells Mitchell.  
Ellis Crosby Moore.  
William Harrison Morgan.  
Lea Murphy.  
Ralph Parkin.  
George Weston Parsons.  
William Parsons.  
Frank Howard Payne.  
Weston Theodore Plumb.  
Kossuth Fillmore Purdy.  
Frank Allen Reed.  
Addison Winfield Rickey.  
Laurel Elmer Robison.  
William Rose.  
Franklin LaFayette Rownd.  
Joseph Augustus Scroggs.  
Edgar Barber Shumway.  
Archie Robertson Small.  
Arthur Henry Steen.  
Daniel Morrison Benonia Thom.  
Edson Reuben Wait.  
Lewis Franklin Walker.  
Spencer Cone Wernham.  
James Delaforet Whitley.  
Constantine Wiley.  
Thomas Royston Wiley.  
Arthur Lee Wright.  
William Henry Youngham.

Honorary Degree.— { Dr. Rogers, Bloomington.  
Dr. Willcox,  
Dr. Theodore J. Bluthardt, } Chicago.

**Directory for the Month.**

*Every Monday. Lectures.*—At Rush College, 9 to 1 o'clock.—Drs. Wadsworth, Bridge, Jackson and Parkes. At the Chicago College, 8 to 12 o'clock. Drs. Quine, Curtis and Roler. At Woman's Hospital College, 9 to 11 o'clock. Drs. Dyas and Fitch.

*Clinics.*—At Mercy Hospital, 3 P. M. Surgery.—Dr. Andrews. At the Central Dispensary (239 W. Van Buren street), 3 P. M. Medical.—Dr. Bridge. At the Eye and Ear Infirmary, 2 P. M.—Dr. Holmes. At Hospital for Women and Children, 1.30 P. M. Gynecological.—Dr. Thompson.

*Mondays, May 4th and 18th.*—Meeting of *Chicago Medical Society*, in the evening, at Gault House.

*Mondays, May 11th and 25th.*—Meeting *Chicago Association of Physicians and Surgeons*, in the evening, at Grand Pacific Hotel.

*Every Tuesday. Lectures.*—At Rush College, 9 to 1 o'clock.—Drs. Owens, Bridge, Adolphus and Parkes. At 4 P. M.—Dr. I. N. Danforth. At Chicago College, 8 to 12 o'clock.—Drs. Bond, Earle, Hutchinson and F. H. Davis. At Woman's Hospital College, 8 to 10 A. M.—Drs. McDonald and Bartlett.

*Clinics.*—At County Hospital, 2 P. M. Surgical.—Dr. Bogue. Medical.—Dr. Bevan. At Mercy Hospital, 3 P. M. Gynecological.—Dr. Roler.

*Tuesday, 19th inst.*—*Illinois State Medical Society*. (Place announced by daily prints.)

*Tuesday, 12th inst.*—7.30 P. M., at 263 Wabash avenue, *Chicago Academy of Sciences*.

*Every Wednesday. Lectures.* At Rush College, 9 to 1 o'clock.—Drs. Wadsworth, E. F. Ingals, Strong and Parkes. At Chicago College, 8 to 12 o'clock.—Drs. Stillias, Sherman, Nelson and Merriman. At Woman's Hospital College, 9 to 11 A. M.—Drs. Thompson and Fisher.

*Clinics.*—At County Hospital, 2 P. M. Gynecological.—Dr. Quine. 3 P. M. Ophthalmological.—Dr. Hotz. At Mercy Hospital, 3 P. M. Ophthalmological.—Dr. S. J. Jones. At St. Luke's Hospital, 8 A. M. Surgical.—Dr. Owens. At Central Dispensary, 3 P. M.—Dr. Bridge.

*Every Thursday. Lectures.*—At Rush College, 9 to 1 o'clock.—Drs. Hyde, Bridge, Jackson and Case. At Chicago College, 8 to 12 o'clock.—Drs. Quine, Earle, Hutchinson and Haines. At Woman's Hospital College, 3 to 6 P. M. Drs. Paoli, Blake and Delafontaine.

*Clinics.*—At Mercy Hospital, 3 P. M. Medical.—Dr. Merriman. At Central Dispensary, 2 P. M. Gynecological.—Dr. Adolphus. Diseases of Chest. Dr. E. F. Ingals. At Hospital for Women and Children, 1.30 P. M. Medical.—Dr. A. H. Foster.

*Every Friday. Lectures.* At Rush College, 9 to 1 o'clock.—Drs. Wadsworth, Hayes, Adolphus and Case. At 4 P. M.—Dr. Danforth.

*Clinics.*—At County Hospital, 2 P. M. Medical.—Dr. Bevan. Surgical.—Dr. Bogue. At Mercy Hospital, 3 P. M. Medical.—Dr. Nelson.

*Every Saturday. Lectures.*—At Rush College, 9 to 12 o'clock.—Drs. Owens, Hay and Strong. At Chicago College, 8 to 12 o'clock.—Drs. Bond, Jewell and Haines. At Woman's Hospital College, 10 to 12 o'clock.—Drs. Curtis and McDonald.

*Clinics.*—At Rush College, 2 P. M. Surgery.—Dr. Gunn. 3 P. M. Diseases of Nervous System.—Dr. Hay.